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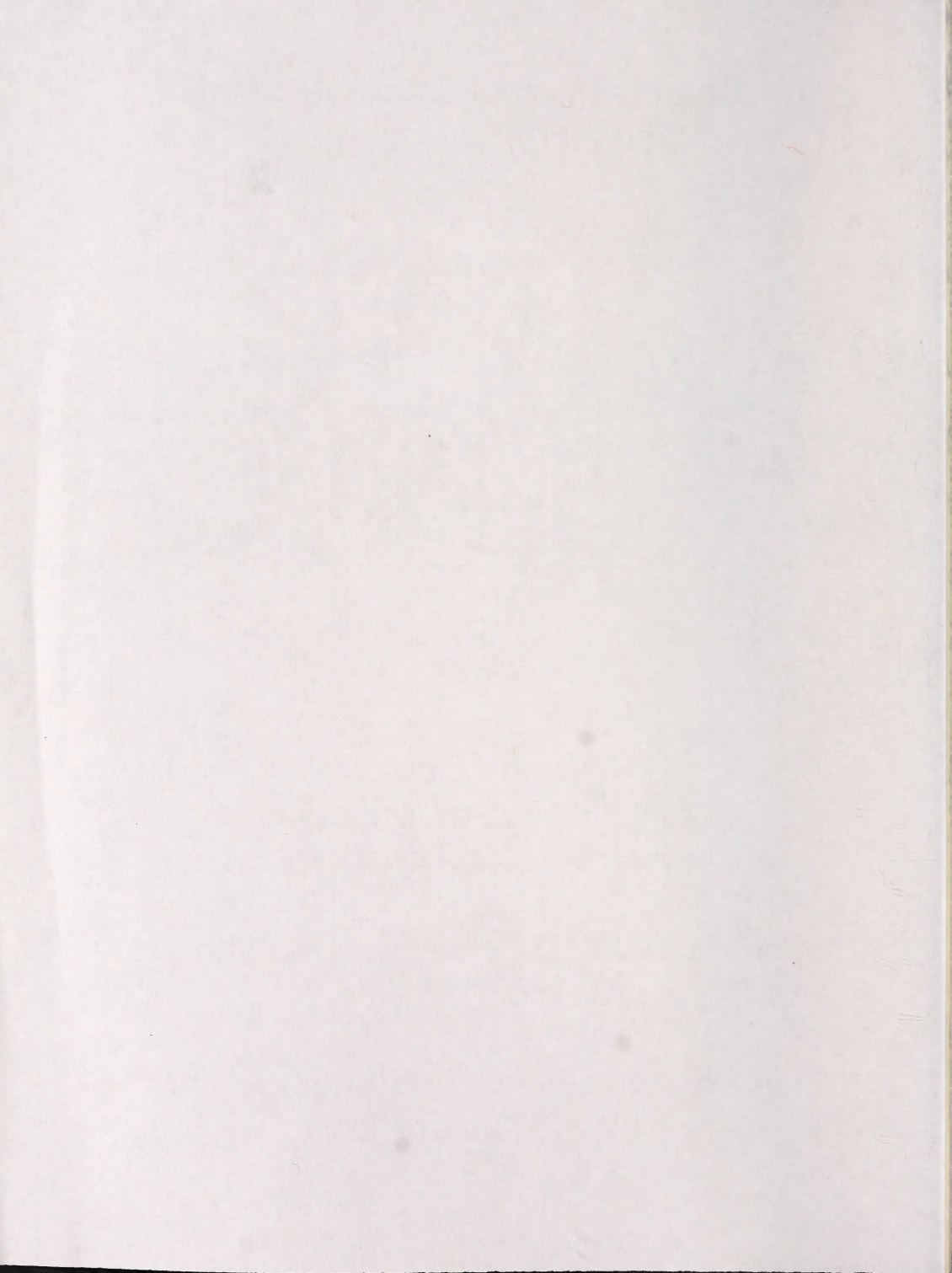
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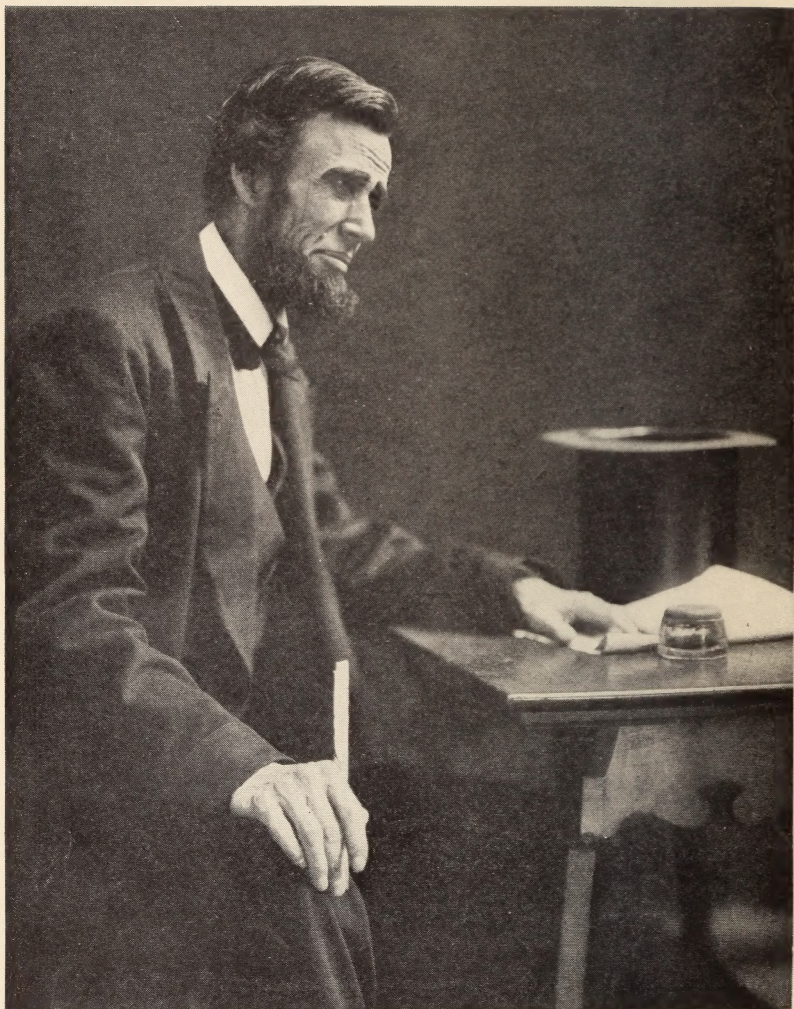
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**MOTION PICTURES
FOR INSTRUCTION**

MISSION PICTURES
FOR INSTRUCTION





Courtesy of American Motion Pictures Corp.

LINCOLN, FROM "THE SON OF DEMOCRACY"—p. 53

The Century Education Series

MOTION PICTURES FOR INSTRUCTION

BY

A. P. HOLLIS, M. S.

FILM EDITOR - DeVRY CORPORATION



NEW YORK
THE CENTURY CO.

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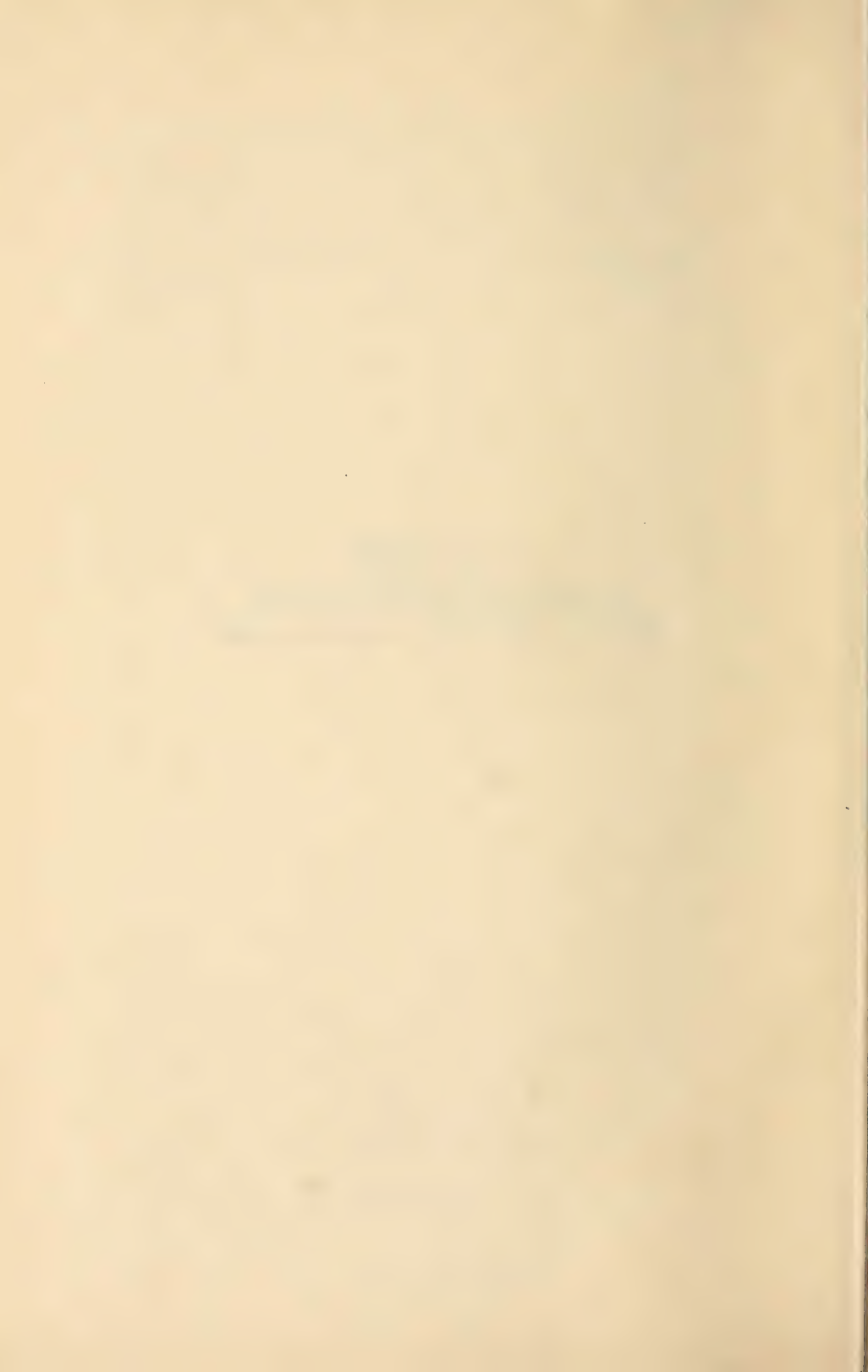
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TO MY WIFE
MABEL MacDONALD HOLLIS,
HELPFUL COMPANION OF EVERY LABOR

9771.5, 6/11/27



PREFACE

The Growth of Visual Education

In 1924, Nelson L. Greene, Editor of the *Educational Screen*, estimated the number of non-theatrical motion picture machines at 15,000. In that same year the National Education Association established a department of Visual Education, and The Commonwealth Fund conducted an elaborate series of experiments in Visual Education (reported in Professor Freeman's volume, *Visual Education*, Chicago University Press). The U. S. Bureau of Education has published a further investigation in the universities, colleges, state departments, normal schools and cities to discover the type of organization and methods employed in visual education departments (*Visual Educational Departments in Educational Institutions*, Hollis). This study and one conducted by F. Dean McClusky of Purdue University, and also a list by J. V. Ankeney, secretary of the National Academy of Visual Instruction reveal that forty universities, normal schools, etc., have an organized department of visual education for the distribution of films, slides and other visual aids, many of which also offer courses in visual education, with college credit, and that fifty cities maintain departments of visual education; that the *Educational Screen* (which has absorbed the magazine formerly called,

Visual Education and is now the recognized organ of the visual education movement) in its booklet, "1001 Films," lists nearly 3000 motion pictures for non-theatrical use; that the U. S. Government, through various departments, has produced for educational use some 250 film subjects, running into two or three times as many reels; that the Ford Motor Company, International Harvester Company, General Electric and similar firms have produced another thousand reels of an educational nature; that numerous health and welfare organizations have added several hundred more; that non-theatrical motion picture companies like Urban-Kineto, Burton Holmes Laboratories, General Vision, American Motion Pictures Corporation, and the Yale University Press Film Service have created a considerable library of educational films; and that even the theatrical motion picture producers have put at the disposal of the schools and churches, a considerable group of feature films, scenics and science films which have educational value.

Where to Get Classroom Films and How to Use Them for Teaching

Despite this very considerable production and use, there is an urgent demand by school people today for information on where to get suitable films to accompany their regular classroom work, and how to use these films so as to produce real educational results. The mass of production cited above is not organized into any one volume embracing both the sources and the pedagogy of educational films. The present book

aims to meet this need. It lists and describes some 1,500 educational films, arranges 120 of these into three different libraries for courses of study, and presents a series of actual film lessons, showing the methods of presentation and follow-up work used by many different educators. Important studies in film pedagogy are discussed, an attempt is made to discriminate between valid and exaggerated claims for this new educational tool, and the latest statistics of the movement are gathered for convenient reference. A bibliography lists the important literature of the subject.

Visual Education and Experimental Psychology

Visual educationists are not primarily psychologists nor physiologists. They have produced nothing new in the psychology of vision, but have concerned themselves with the organization and use of visual stimuli adapted to education. The research laboratories in experimental psychology and the physiology of the senses are common sources to which all can go for the technical data of vision. Specialists like Wundt, Humboldt, and Münsterberg have made substantial contributions to our knowledge of vision, and the curious reader is referred to their works for the psycho-physiological facts of this important sense.

The "87%" Myth

Writers in visual education who have been tempted to use figures giving the percentages of our knowledge gained through the different senses have found

themselves embarrassed when exact sources and quotations were demanded. Reliable laboratory data on such facts have not been reduced to such exact form.

Five years ago the author attempted to run down a statement which had been much used by commercial moving picture interests and quoted by educators. One magazine ran a diagram divided like a pie showing that psychologists agreed that 87% of our knowledge was gained through the sense of sight. The author determined to trace the psychologists who had agreed. He wrote the editor for their names. The editor didn't know any, but referred to a prominent business man, who had made the statement; the business man said he didn't know the psychologists, but he heard a preacher state it in a sermon.

Educators have taken the educational value of visual data for granted for many years, and the classroom is full of blackboards, maps, pictures printed on paper, or enlarged and projected by lenses. The tremendous vogue of the moving picture and the new emphasis it has given picture language, has impelled educators to bring films and slides into the schools. But the motion picture, especially, involved the use of unfamiliar and costly machines, and films required a technical knowledge of storage, patching and shipping.

Film Pedagogy, an Unknown Quantity

There had been no pedagogical study of the motion picture. Volumes had been written of it as an art, and as a commercialized amusement. But as a school-room performer, its operation and effects were un-

known. It was, therefore, a logical step to create special school officers to handle the new aids, and special societies to discuss them. Experimental studies were instituted by teachers, with parallel classes of children. A systematic search developed for really educational films, and the attempt was made to establish standards. Interesting data on these pedagogical aspects of the film have accumulated in a relatively short time. It is the purpose of this book to bring to the attention of the teachers generally, the constructive methods that have been worked out in teaching film lessons to children, and to select and arrange in convenient "libraries" according to school subjects, the best of the educational films available.



EDITOR'S INTRODUCTION

The great place which the moving picture has secured in the life of the world has resulted in innumerable discussions of its importance in connection with education. When millions of people are viewing moving pictures every day of the year there must be serious effects of an educational character whether the films which they are seeing are good, bad or indifferent. The wide spread of moving pictures including almost all conceivable subjects, has inevitably resulted in the production of many which have, distinguishable from those whose purpose of observation is purely for amusement and relaxation, definite educational values.

For some time the problem of how to make use of moving pictures in connection with a definite curriculum of study has been under consideration by the educational profession. Tentative experiments looking towards their incorporation as a part of the procedure of the school have been made in many school systems. Here and there generous appropriations for the organizing and maintaining of departments of visual education which make large use of the moving picture have been secured. The city school superintendents have shown a very open mind towards the whole problem and in many cases have evidenced their real enthusiasm in efforts looking towards a more serious and

scientific use of this instrument of learning in their school system.

It was inevitable, however, on account of the mushroom-like rapidity with which this new industry has developed, that the problem of selecting and securing suitable films became serious. Many films advertised as educational, upon examinations seemed to be utterly unsuited in every way to use in public schools. Not infrequently superintendents have become discouraged after spending, to them, rather large sums of money by finding that much of this expenditure had been wasted.

On the other hand, during this same period, on account of a steadily increasing seriousness on the part of many moving picture producers, there has been a steady accumulation of films of genuine educational merit which when properly analyzed may be utilized in public school systems to the finest advantage. The question as to the practicability of seriously incorporating the motion picture into formal educational work became sufficiently important to justify the granting by the educational committee of the Commonwealth Fund of a sum of money to be used for the purpose of making a scientific study of educational motion pictures. The results of this study, while tending to overthrow some of the claims made by the more enthusiastic advocates of the moving picture in education, confirmed a growing conviction of editors that, properly used, many films could constitute a most invaluable supplement to other more conventional types of learning. The realization that an immense body of suitable visual educational material was available with-

out it being within the power of the ordinary superintendent to know just how to go about the proper selection of this material, and the scientific determination of the very real educational value of suitable educational films, has led the author to prepare this volume. He has undertaken in addition to a consideration of the value of the motion picture film as a teaching instrument, to organize as comprehensive a list as possible of the various films which may be secured either by purchase or rental. These lists of films are prepared in such a way that some notion as to their availability can be secured although the number of the films listed is so great that any estimate or critical description has been impracticable. It is our belief that school superintendents throughout the country will find this an invaluable hand book and that through its study and use the effectiveness of the motion picture as an educational agency may be greatly increased. Without any question each year will witness an increasing use in our public schools of films. Without proper guidance great waste of money and pupils' time may result. With a careful, intelligent guidance on the part of those responsible for the selection of films and their proper correlation with the other organized activities of the school, we will see a real step forward in educational efficiency.

C. E. CHADSEY

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PART I

THE MOTION PICTURE FILM AS A
TEACHING INSTRUMENT

MOTION PICTURES FOR INSTRUCTION

CHAPTER I

EDUCATIONAL FILMS—TYPES AND USES

Terminology

What is meant by the term Educational Film?

It is not strange that so new a product suffers some confusion in nomenclature. In theatrical circles all short subjects, as distinguished from dramatic features, are frequently called "educationals." Comedies are excepted. But scenics, news weeklies of whatever description, novelty reels, and advertising reels are all included.

An annoying instance of the loose use of the word, "educational," was referred to in a recent issue of the *Educational Screen*:

THAT WORD "EDUCATIONAL"

Carl Sandburg, the distinguished motion picture reviewer for the Chicago Daily News, in the course of some remarks on an "educational comedy," deplores the fact that the Educational Film Exchanges, Inc. exploits the term "educational" for comedies and short subjects that have no claim to the adjective.

Mr. Sandburg said something. The name "Educational" has long

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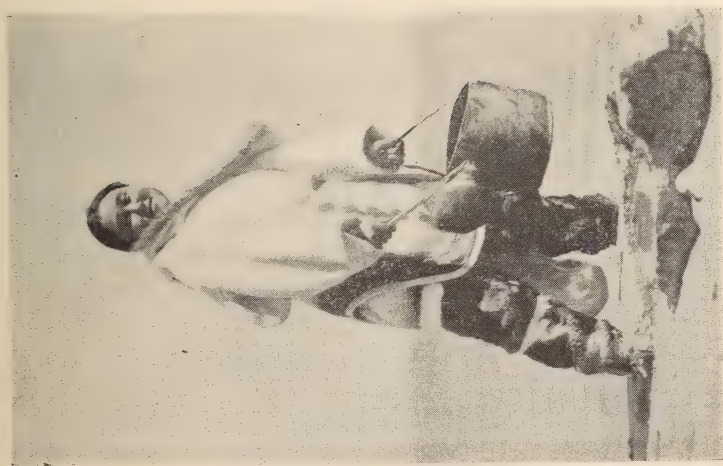
since ceased to be a descriptive term for the typical productions of that excellent company. The name has been a thorn in the flesh of the non-theatrical world for several years. We should think it would be similarly annoying to theatrical exhibitors, and especially to their audiences at seeing these pleasant absurdities on the screen bearing the familiar legend—

EDUCATIONAL PICTURES

"The Spice of the Program"

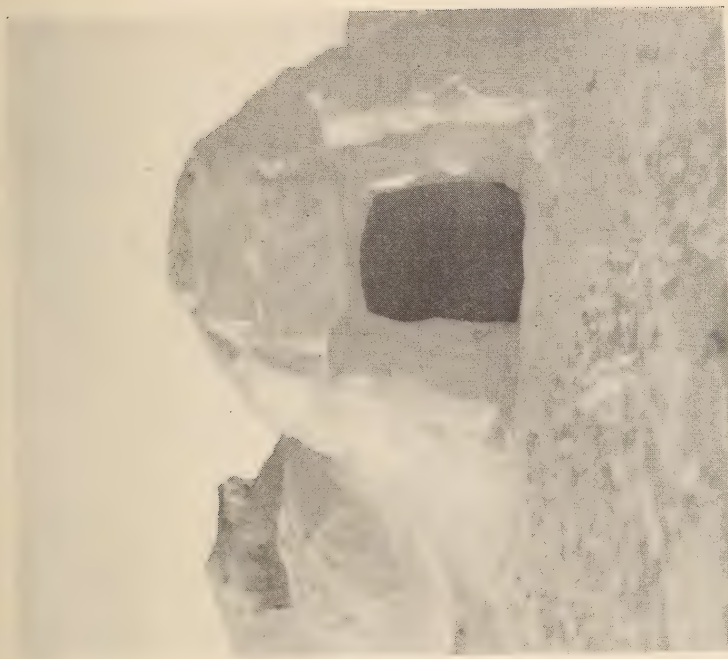
All "Educationals," in the accepted meaning of the term, suffer from this burlesque—and the whole field is kept busy explaining to disappointed schools and churches the unfortunate implications of the name. The Educational Film Exchanges, Inc. should either change their name or their product.

In practice, things are named from their dominant purpose or use. It is obvious that nearly every theatrical motion picture will convey information of some sort about life and customs, but we do not, therefore, call a Mae Murray film educational. Those films should be included in the term "Educational," that are predominantly educational. "Nanook of the North," a theatrical film, is nevertheless one of the best of the educationals; most scenics and industrials might be permitted to bear the label. These can properly be called "general educationals." Where the educational film is designed for purely instructional purposes and is made by educators for educators, the term "classroom film" or "text film" has been suggested. The word "text," however, is not to be understood as implying that the film is designed to take the place of a textbook, but only as an illustration to the textbook—a moving picture supplement to the text. Neither the textbook nor the text film is of much value



Courtesy of Pathé Exchange

FROM "NANOOK OF THE NORTH"—p. 4



Courtesy of Pathé Exchange

IGLOO IN "NANOOK OF THE NORTH"—p. 4

unless the teacher is present to see that they are properly presented and used—and that the critical follow-up work takes place.

Examples of the modern text or classroom film are Bray's "Elements of the Automobile" (12 reels); "Secrets of Life" Series, Tolhurst; Ditmar's "Living Natural History"; "How Life Begins"—microscopic studies by Charles F. Herm; Wythe's "Citizens in the Making"; and the series of technical films on anatomy produced at the University of Wisconsin. A large list of such films is given in Part II, Comprehensive List of Educational Films (with descriptive notes).

The term "Propaganda Film" embraces a large group of educational films designed to aid some "cause" or business, and constructed to appeal to popular audiences. The term and the product sprang into prominent use during the war. Most of the Government war films were of this character; also some of the Department of Agriculture films, but many of these are of such scientific and pedagogical value as to deserve classification among the text films. The National Health Council, the American Red Cross, Y. W. C. A., Boy Scout, International Harvester Company, General Electric Company and hundreds of advertising reels come under this classification. Such films vary greatly in pedagogical value, and need close inspection prior to use in the classroom.

Text Films to Accompany Textbooks

This book has one advantage in the field of visual education. It has set out a clear field for itself. It

deals with films alone—not with slides, stereographs, press pictures, museum exhibits, or projection machines. And among the films it limits itself, with few exceptions, to classroom or text films in the Film Libraries, arranged to illustrate the course of study.* Semi-dramatic productions, and miscellaneous films combined in “programs” for the school assembly, to be shown to masses of children of varying grades assembled for the purpose—on special occasions or for the “auditorium period” in schools under the platoon system—are both too long and too varied in character for serious classroom study conducted under the rigid requirements of the daily time schedules.

The “Assembly Room” Type of Film

It was natural that films, at first, drifted out from the theatres into the schools; and this type of general educational, semi-entertainment film program is still of value on occasion. But such occasions are not the subject matter of this book. The films discussed here are the every day, informational type of films for classroom use, having much the same functions as the illustrations in the textbook, with the added action, size, color, illumination and intensity which the screen image has over the book picture. On the one hand, the

* Bulletin 8 (1924) by the author, U. S. Bureau of Education, page 27, suggests the following classifications for films used in educational institutions:

- (1) “Text films,” meaning those used to definitely illustrate the text in class instruction;
- (2) “General education,” when the material is fairly educational, but not used specifically for a class topic; and
- (3) “Entertainment,” where that is the obvious use and purpose.

text film does more than the illustration in a book, as it compels attention to pictures and the text relating to it, in a manner impossible to books. On the other hand, it cannot be so easily and repeatedly consulted as the textbook picture.

Trivial Use of Pictures

Miss Edith Putnam Parker and Mr. Barrows have called attention in a new geographical series (Silver, Burdett & Co.) to the almost trivial use that is usually made of pictures in a text. The pictures in a text are not studied; they are glanced at, and almost instantly abandoned for the real study material in the text itself. Whereas Miss Parker and Mr. Barrows have shown that the picture is as much a proper subject of serious study as the text. It should be accompanied with directions, notes, questions and "layout" commensurate with its importance.

The picture has undoubtedly gained a new importance generally from the motion picture version; and though the frequent banalities of the theatre screen cast some doubt on the importance of pictures to the mental life, we know this is not the fault of the medium, but of the box office.

Three Film Libraries for the Curriculum

In Chapter II, three short film libraries using classroom or text films are outlined for use with a typical American school course of study. They are the results of years of investigation and trial. Most of the

films have been tested by the author; others have been selected on the recommendation of educators on whose judgment he relies.

They are put down in this outline form for the sake of definiteness, and to make it easy for school people who have little time to study the question to go ahead and make a start, feeling sure that somebody else has made a careful and practical study for them.

The Film Libraries Only Suggestive

But from every other standpoint, the film libraries can be taken only as suggestive—only as nuclei, from which each school system may create its own film course, either at first, or after a year's trial of the outline. It is obvious, for instance, that the various free and rental films given as substitutes for the regular numbers, may be so used, or they may be used in addition to the regular reels, thus doubling or trebling the number of reels in the various courses. Or reels may be freely chosen from the Comprehensive List of Educational Films (Part II), as practically all of these are suited for classroom use, many of them equal or superior to those in the outline.* To cite all the reasons why this or that film was finally included in the regular outline would be tedious and unnecessary. Matters of cost, availability and knowledge of particular films were usually involved.

* Except most of those given in Part II under Literature, which are frequently too long and dramatic for classroom use, and are listed mainly for reference for those teachers who want to know the films that use standard literary works as backgrounds.

Moreover, because city courses of study are not uniform as to the year in which particular subjects and topics are taken, each teacher or supervisor will have to switch the films somewhat to suit the degree of divergence from the typical course followed in the outline. Many of the films can be used in grades not specified, where the teacher is careful to select the appropriate scenes, and to fit her recitation plan to the grade in question.

Film Libraries for Varying Pocketbooks

A real effort has been made to suit the pocketbooks of small systems that have but little money to invest in films, but would still like to get a start at visual instruction. Both free and rental reels are suggested as substitutes for purchase reels, and where rental reels are written into the course, free reels are frequently offered as substitutes.

These substitutes, however, are suggested as only a temporary expedient. If the means are available for getting the purchase and rental films of the libraries, school systems should take them as they are, without substitutes, as most of the library films are supplied by the producers with synopses and teachers' notes, and the films written into the outline usually represent a better correlation with the school course of study than do the substitutes.

Most small systems starting the work will find that the Eighty Reel Unit, or two films per week, will answer their needs for the first year. The Forty Reel

Library contains an average of only one per week for the school year, the Eighty Reel Library, two per week, and the One Hundred and Twenty Reel Library, three per week.

While from the standpoint of small towns these may seem like a large number, it should be remembered that this number provides only about a half dozen reels for a grade during the year. But if this should appear too inadequate a service, reflect that the class should nearly always see each film more than once, and that other grades than the ones set down may see the film to good advantage at the time it is in the building, if it contains material relating to their lessons. Large cities that already have generous budgets for visual instruction, and, therefore, film libraries of hundreds of subjects will find the number of films indicated here quite inadequate for their purpose, but even so, the particular films listed may prove suggestive. The film practices of some of the larger cities are described at some length in Chapter VIII.

In fact, free and rental reels will have to be arranged for several days' use, so as to allow for second showings and also to complete the circuit of the other schools in the system, that are at or near the same topic in the curriculum; the purchase reels can be used whenever and wherever they are wanted—which emphasizes the real advantage of each school system gradually acquiring a film library of its own.

Most of the purchase reels in this series are accompanied with teachers' leaflets, giving additional facts concerning the topics in the reels, and suggestions for teaching.

A Director of Visual Education

From the time the school system starts visual instruction, it should appoint a director of visual instruction to care for and distribute the slides, films, machines, and other apparatus of the course; the films should be ordered far enough in advance, and each teacher should be notified when the showings are to be made, and should receive in advance the synopses and notes accompanying the films that are to be supplied.

The ideal prerequisite to a classroom film showing is for the teacher to have an opportunity to see the film before the children do, so she can select the parts for emphasis or slight treatment, and frame her questions and follow-up work accordingly. But unless the teacher can run the machine herself it requires twice the amount of time from the operator; a good plan is for each room in the upper grades to have one boy or girl who has been trained to thread and operate the projector.* Learning to do this is a simple matter of an hour's instruction, and the running of several practice reels through the machine.

In one system, reported to the author, the teachers assemble at the beginning of the school year, and once a month during the year at a designated time to view the group of films for the coming months, synopses of the films are distributed and as the pictures are reeled off, the teachers have the opportunity of making any notes they may desire.

* For this and other reasons (see Appendix) a portable projector is recommended for school use.

A committee on visual instruction, one member for each main subject of study, should be appointed to fit the film course to the local textbooks and outlines, and to help teachers plan their work. The superintendent should recommend a budget for the rental and purchase of materials, and for the proper compensation of the director. Older students, as well as teachers, can be trained to rewind and inspect the film after each showing, and to operate the portable motion picture projectors.

Film Correlations Only Partial

The correlation suggested for each reel has been made on the basis of its principal content. Not every scene in each is equally well adapted to the related topic. A more perfect correlation could be secured if the teacher or school committee should select just the illustrations desired, in short lengths, from classified catalogues of film negatives, and have prints made to order in any length. It is the only way to avoid waste of time and footage and build up a permanent library of motion picture illustrations, every foot of which is germane to the topic for which illustration is desired. There are few such catalogues in existence, however, and their contents are chiefly of interest to theatrical producers. Bray Productions Inc., New York City, and the DeVry Corporation, Chicago, will make short prints to order from their extensive collections of educational film negatives.

Simple motion picture hand cameras, requiring no tripod nor cranking, are now on the market and can be





35 mm. film



16 mm. film

THE SAME PICTURES SHOWN ON BOTH WIDTHS
OF FILM (EXACT SIZES)—p. 15

made indispensable adjuncts to any visual instruction department, as they enable the amateur to take his own motion pictures of many subjects that are available in his own school or locality.

Only those cameras using the full theatre size (35mm.) film, however, take pictures that can be shown direct in theatres and standard portable projectors found in the majority of schools.

All Films Are of Standard Width

Only films of the standard width (35 mm.) adopted early in the history of the industry, by the Society of Motion Picture Engineers, are recommended for the three film libraries outlined in this book, or listed in the Comprehensive List of Films in Part II. The reason is the obvious one of making available to the schools the best films of all the world. Any other width film adopted would limit the schools to a very small fraction of the world's film production.

In February 1925, at a meeting of the Department of Superintendence of the National Education Association it was announced that Mr. George Eastman of the Eastman Kodak Co., had offered to co-operate with the N.E.A. Committee on Visual Education in a production of a series of moving pictures on narrow width film to be produced for classroom work. The Eastman Kodak Company manufactures a camera and motion picture projector both of which take 16 mm. film. The Company secured the co-operation of the Visual Education Committee which selected the following ten cities in which to try out the film for two years: Rochester, De-

troit, Chicago, Kansas City, Denver, Los Angeles, New York, Springfield or Newton, Mass., Atlanta, Winston-Salem. The films will be for the fourth, fifth and sixth grades and the junior high school, and will illustrate the following subjects: Geography, Health and Hygiene, Civics, Fine and Practical Arts, and General Sciences. We are not told the number of films that will be produced for this purpose but are informed that the Eastman Kodak Company will furnish their Kodascope Motion Picture Projector and all 16mm. films necessary for the experiment. The 16 mm. prints however, will be made from standard size (35 mm.) negative. An enterprise of this kind financed by one of the richest business firms in this country ought to produce evidence which will determine the comparative values of standard and off-standard films and projectors in public school work. We will have to wait two years before a report is made on the work accomplished.

Grading Is in Teacher's Presentation

The fact that films are frequently not designated for a specific grade is not as great a drawback as it might seem at first glance. The film is primarily a *series of pictures for illustration*. Pictures are not as easily assigned to specific grades as are books; the gradation should be done by the teacher in handling the picture; the kind of questions and supplementary facts which she uses will depend on the age and ability of the child. The same picture may be used with a fifth grade child

and a high school graduate, but the treatment will be entirely different. For instance, in "The Oregon Course of Study Illustrated," the films, "Having a Circus" and "Starting in Life" are listed for second grade geography and also for high school biology.

"Motion Pictures," says Professor Freeman in *Visual Education*, "should be so designed as to furnish to the teacher otherwise inaccessible raw material of instruction, but should leave the organization of the complete teaching unit largely to the teacher. The explanation, discussion or elaboration of the material which is shown in the film is a function of language. Language can be used fully as effectively, if not more effectively, by the teacher as by the film. Furthermore, the class should take a large share in the discussion. The reduction of the motion picture to its essential core will promote both economy and flexibility."

However, in a large way, certain pictures are better adapted to fifth grade children, than to college juniors, and these rough gradations are sometimes indicated. They are, however, only suggestive, as the teacher's treatment of the picture will be the main factor in reference to the grade with which it may be used. The teacher's leaflets accompanying many of the films, and the encyclopedias and the supplementary texts in the library, will furnish the additional supplementary material for interpretation and study.

It is evident that the particular day, week and month when a film should be used cannot be designated in a general schedule, as the various cities in the United

States use different texts and arrange topics in differing sequences. Here again the teacher's intelligence must be the guide.

The visual instruction committee or director should note where the topic covered by each film is treated in the textbooks or outline of the course of study in each city. The films should be designated for definite pages in the textbooks or lesson outlines during the week which the local course of study specifies for the topic.

No claim is made that these films are the best possible selections for each of the topics included. Other factors, such as availability and cost, had to enter in. But a sincere effort was made to include no unsuitable film and to so edit, in the notes, those that are included, that teachers will be guided to use the most significant scenes and titles. The teachers' own titles may be added with stereopticon slides, or can be copied on two or three frames * from a card with the movie camera and added to the film. The stop-on-film shutters of portable projectors make long footage for titles unnecessary.

Motion Pictures not Always Limited to Action Scenes

The opinion is expressed quite generally among educators that it is a waste of time and money to include any views in motion picture film which do not contain action, as these "stills" can be shown equally well with

* A "frame" on a strip of moving picture film means one of the little pictures of which there are sixteen to the foot.

the cheaper slide, and can be held on the screen much longer for observation. Some educators go so far as to say that no titles should be printed on the motion picture film, as these call for no action. Titles can be thrown on the screen with a stereopticon and slides.*

One can agree in a general way with the obvious principle that only action should be shown with motion pictures, but this general agreement should admit of many exceptions. Quite frequently *convenience* outweighs expense, in the use of many electrical appliances and various business practices. When a motion picture of a moving railroad train engages the attention, and a striking bit of scenery is in the vicinity, the audience is in a mental state to appreciate the scene as it flashes on immediately after the motion, and this heightened state of attention far outweighs the saving effected by waiting until the whole exhibition is over to show slides, or stopping the film and switching on the stereopticon slide. "Stills" frequently relate to bits of action that justify a motion picture presentation. In the mountain view, floating clouds increase the beauty and heighten the effect of reality, as does a distant bird flying, or a burro climbing a mountain pass.†

* "Subject matter should not be included in educational films which is not primarily the representation of motion or action."—Freeman.

† "In this connection let us refer to the quotation previously made that 'Of still objects like the Capitol at Washington, a banana tree, the Panama Canal, etc., a more comprehensive view may be obtained from still than from moving pictures.' The broad assumption is made that all of these are still objects. This is wrong. The banana tree is growing and yielding its harvest to the native fruit gatherers, the Panama Canal with its locks opening and closing, the water within them lowering and raising and sending thousands of ships on their way, are very far from still objects. The visual educator should distinguish in recommending the still picture in preference to the cine-

Similarly, when a manufacturer is producing a film of the manufacture of his product, while much of the machinery and the exterior of his plant could be shown equally well as "stills," he knows that the audience would likely not see at all what he wishes to show if he does not run it in then and there with the complete continuity of the story. Few operators would bother to show the slides separately with different lenses, and the audience would perhaps lose interest and not wait for slides at the end. School children would be under stricter control and could be made to wait for the slides, but the principle must not be overworked where the "stills" are natural to the scene, and take short footages.

It is certainly true that dwelling on maps, diagrams, exteriors of buildings, blackboard drawings and cross sections in "educational" movies has been overdone, and educators should plan to eliminate such views where all the circumstances justify it. But they should be equally free to include "stills" where the circumstances justify it.

Schools Should Purchase Films

Heretofore it has been very difficult for school boards to purchase their own film for a permanent film library on account of the high sale prices put on films by producers, the producers' desire being to rent rather than sell prints. This practice is more or less

matographic, whether he has in mind teaching merely the form of the tree and the construction of the canal, or their life and growth and use."—*Motion Pictures in Education*, Ellis and Thornborough.

traditional in the theatrical world. The adoption of portable motion picture machines as regular equipment by schools calls for a radical change in the method of handling film. The school is used to purchasing its illustrative material in the form of globes, maps and scientific apparatus. It purchases the books for its permanent library. The same procedure should be followed in the case of slides and films. After educators have settled on certain films as the best available to illustrate certain topics in the course of study, and the films have been listed for correlation with these topics, under the rental system there is no assurance that the same films will be available the next year, or that they can be secured at the time desired. Transportation losses and delays are annoying. Under the purchase plan, this uncertainty is removed, and the school has the same control of its film supply from year to year that it has over its books and other teaching aids.*

* The DeVry Corporation, 1111 Center Street, Chicago, has a Classified Library of Film Negatives (about 150,000 ft.) gathered from many parts of the world, from which films of standard width are sold outright to schools in short lengths suitable for classroom use. All prints are on non-inflammable stock, so that there can be no fire hazard in their use, either while being run in projectors or while in storage.

A large group of Purchase Films will be found in the Comprehensive List of Educational Films (Part II).

CHAPTER II

THREE FILM LIBRARIES FOR THE COURSE OF STUDY

FORTY REEL LIBRARY

Films selected for these three libraries are printed in *italic* type; substitute films, in ordinary type. The numbers after the films refer to the Descriptive Lists of Films in Chapter III, arranged alphabetically under the headings: Purchase Films, Rental Films and Free Films.*

Films numbered up to 100 are Purchase Films, those from 100 to 200 are Rentals, and from 200 to 300 are Free Films.

Brief notes describing each film are given in Chapter III, together with addresses of exchanges and prices.

GEOGRAPHY

California's Wonders
(Purchase No. 1)

Grades 5 & 6

Substitutions: (See Teacher's Leaflet, page 76.) †

* Free films when distributed by University centers usually have a service charge of from 50 to 75 cents a reel. The Y. M. C. A. free films have no service fee.

† Full lesson plans with synopses, questions, references, etc., are

(Rental No. 101)	
(Free No. 201)	
<i>Grand Canyon (In Color)</i>	Grades 5 & 7
(Rental No. 102)	
Substitutions:	
(Free No. 202)	
<i>The Yellowstone</i>	Grades 5 & 7
(Free No. 203)	
<i>Fair Florida</i>	Grades 5 & 7
(Purchase No. 2)	
Substitutions:	
(Free No. 204)	
<i>Cuba (2 reels)</i>	Grade 6
(Free No. 205)	
<i>Enchanting Japan</i>	Grade 6
(Purchase No. 3)	
Substitution:	
(Rental No. 103)	
<i>India and Tibet</i>	Grade 6
(Purchase No. 4)	
Substitution:	
(Rental No. 104)	
<i>Palestine</i>	Grade 6
(Purchase No. 5)	
Substitution:	
(Rental No. 105)	

given in Chapter V, for six of the films included in these libraries.
The films are:

- No. 1—California's Wonders.
- No. 110—Immigration (2 reels).
- No. 114—Bre'r Rabbit and His Pals.
- No. 226—Uncle Sam, Champion Farmer.
- No. 10—Milk as Food.
- No. 134a—American Ideals.

HISTORY

- American Indians and Their Ancestors* Grades 5 & 7
 (Purchase No. 6)
 Substitutions:
 (Rental No. 106)
 (Free No. 206)
- Landmarks of Our Forefathers* Grades 5 & 7
 (Rental No. 107)
 Substitutions:
 (Free No. 207, first reel)
- New England Shrines* Grades 5 & 7
 (Rental No. 108)
 Substitution:
 (Free No. 208, second reel)
- Eve of the Revolution* (3 reels) Grades 5 & 7
 Chronicles of America
 Photoplay, Yale
 (Rental No. 109)
 Substitutions:
 Eastern Scenics
 (Free Nos. 209, 210, 211)

CITIZENSHIP

- Immigration* (2 reels) Grades 5 & 7
 (Rental No. 110)
 Substitutions:
 (Free Nos. 212 & 213)
 See Teacher's Leaflet, page 99.

NATURE STUDY—BIOLOGY

Mammals

(Purchase No. 7)

Substitutions:

(Rental No. 111)

(Free No. 214)

Birds

(Purchase No. 8)

Substitutions:

(Rental No. 112)

(Free No. 215)

Bre'r Rabbit & His Pals—Rodents

(Rental No. 113)

Substitution:

(Free No. 216, 1st reel)

Ants, Nature's Craftsmen

(Rental No. 114) See Teacher's Leaflet, page 72.

Substitution:

(Free No. 216, 2d reel—no correlation with ants)

Honey Makers (Bees)

(Rental No. 115)

Substitution:

(Free No. 217)

Baby Song Birds at Meal Time

(Rental No. 116)

Substitution:

(Free No. 218)

LANGUAGE AND LITERATURE

<i>Pied Piper</i>	Grades 5 & 6
(Rental No. 117)	
Substitution:	
See Note Below	
<i>Irving</i>	Grades 5 & 6
(Rental No. 118)	
Substitution:	
See Note Below	
<i>Cooper</i>	Grades 5 & 6
(Rental No. 119)	
Substitution:	
See Note Below	
<i>Bryant</i>	Grades 5 & 6
(Rental No. 120)	
Substitution:	
See Note Below	
<i>Whittier</i>	Grades 5 & 6
(Rental No. 121)	
Substitution:	
See Note Below	
<i>Longfellow</i>	Grades 5 & 6
(Rental No. 122)	
Substitution:	
See Note Below	

Note: Free Films: There are practically no free films that correlate well with literature, and where free films are desired for the English classes, we recommend that scenics like the following be substi-

tuted: 219, 220, 221, 222, 223—these to be used as bases of compositions and conversations.

VOCATIONAL

Dairying

(Purchase No. 9)

Substitution:

(Free No. 224)

Garden Gold

(Free No. 225)

Uncle Sam, Champion Farmer

See Teacher's Leaflet, page 88.

(Free No. 226)

Wizardy of Wireless (2 reels)

(Free No. 227)

Buick High Spots

(Free No. 228)

PHYSIOLOGY, HEALTH AND WELFARE

Milk as Food

(Purchase No. 10)

See Teacher's Leaflet, page 81.

Substitution:

(Free No. 229)

Through Life's Windows

(Rental No. 123)

Substitution:

(Free No. 230)

ATHLETICS

Winter Sports

(Purchase No. 11)

Substitution:

(Free No. 231)

Gridiron Glory

(Rental No. 124)

Swift and Strong

(Rental No. 125)

Substitution:

(Free No. 232)

Eighty Reel Library

(All of the 40 reels in the Forty Reel Library and the following 40 additional reels)

Find numbers, addresses of exchanges, cost, etc., for each reel in "Descriptive List of Films in the Three Libraries" (Chapter III).

GEOGRAPHY

<i>Australia and New Zealand</i> (Purchase No. 12)	Grade 6
<i>Rice and Copra in the Philippines</i> (Purchase No. 13)	Grade 7
<i>Filipino Primitives</i> (Purchase No. 14)	Grade 7
<i>Athens the Glorious, Pathé Color</i> (Rental No. 126)	Grade 6
<i>The Ancient Duchy of Brittany</i> (Rental No. 127)	Grade 6
<i>Three Ancient Cities of France</i> (Rental No. 128)	Grade 6
<i>East is East (Northern Africa)</i> (Rental No. 129)	Grade 6

Free Films as Substitutes for Above

There are few free films available on foreign countries; so those indicated below are substitutes in a very general sense only:

<i>Crossing the Atlantic</i> (Free No. 233)
<i>From Tropic Isles</i> (Free No. 234)
<i>In Gulfs Enchanted</i> (Free No. 235)
<i>Panama Canal (2 reels)</i> (Free No. 236)
<i>The Lone Asian Traveler</i> (Free No. 237)

Through the Open Door of Manchuria
(Free No. 238)

HISTORY

<i>Dixie, Yale Chronicles of America</i>	Grade	7
(3 reels)		
Rental No. 130)		
<i>Evolution of Transportation (Land)</i>	Grades 5 & 7	
(Purchase No. 15)		
Substitution:		
(Rental No. 131)		
<i>Evolution of Transportation (Water)</i>	Grades 5 & 7	
(Purchase No. 16)		
Substitution:		
(Rental No. 132)		
<i>The Call to Arms (Lincoln Cycle)</i>	Grade	7
(2 reels)		
(Rental No. 133)		
<i>The Real Roosevelt (2 reels)</i>	Grade	7
(Rental No. 134)		

(There are no free films to substitute for the historical films, but patrons may draw from the free list at the back of this book, when close correlation is not necessary.)

CITIZENSHIP

<i>American Ideals</i>	Grade	7
(Rental No. 134A)	See Teacher's Leaflet, page 108.	

Substitution:

(Free No. 239)

Boy Problem Solved

(Free No. 240)

Moulders of Manhood

(Rental No. 135)

Substitution:

(Free No. 241)

NATURE STUDY—BIOLOGY

Reptiles

Upper Grades & High School

(Purchase No. 17)

Adaption (Animal Camouflage)

(Rental No. 136)

Substitution:

(Free No. 242)

Mollusks

(Rental No. 137)

Substitution:

(Free No. 243)

Crayfish

(Rental No. 138)

Birds of Passage (3 reels)

(Rental No. 139)

Substitution:

(Free No. 244)

Watching the Weather

(Free No. 245)

LANGUAGE AND LITERATURE

Holmes

(Rental No. 140)

Lowell

(Rental No. 141)

Poe

(Rental No. 142)

Twain

(Rental No. 143)

Whitman

(Rental No. 144)

There are no free films that really correlate with the literary subjects above. Where patrons cannot afford to rent these films, we suggest scenics from the free list at the back of the book. Any good educational film can be used in English classes as the basis of composition and discussion.

VOCATIONAL

Bill Jones, Champion

(Free No. 246)

Conquest of the Forest

(Free No. 266)

A Woolen Yarn

(Free No. 268)

ONE HUNDRED AND TWENTY REEL LIBRARY 31

PHYSIOLOGY, HEALTH AND WELFARE

How We Breathe (1½ reel)

(Rental No. 145)

Substitution:

(Free No. 247)

How We Hear (1½ reel)

(Rental No. 146)

Substitution:

(Free No. 248)

One Scar or Many

(Free No. 249)

Working for Dear Life

(Free No. 250)

ATHLETICS

Dances of Many Nations

(Purchase No. 18)

Corrective Gymnastics

(Purchase No. 19)

Substitution:

(Free No. 251)

ONE HUNDRED AND TWENTY REEL
LIBRARY

(All of the 80 reels in the Forty Reel Library and Eighty Reel Library and the following additional reels)

Find numbers, addresses of exchanges, cost, etc., for each reel in "The Descriptive List of Films in the Three Libraries" (Chapter III).

GEOGRAPHY

<i>The U. S. Ten Talent Nation:</i>	Grades 5 & 7
(A selection of four reels from the complete series. The complete list is given in Part II.)	
<i>Soil</i>	Grades 5 & 7
(Rental No. 147)	
Substitution:	
(Free No. 252)	
<i>Water</i>	Grades 5 & 7
(Rental No. 148)	
Substitution:	
(Free No. 254)	
<i>Minerals</i>	Grades 5 & 7
(Rental No. 149)	
Substitution:	
(Free No. 255)	
<i>Formation of Volcanoes and Geysers</i>	Grades 5 & 7
(Rental No. 150)	
Substitution:	
(Free No. 265)	
<i>Philippines and Manila</i>	Grade 7
(Purchase No. 20)	
<i>Work and Play in the Philippines</i>	Grade 7
(Purchase No. 21)	
<i>Java</i>	Grade 7
(Purchase No. 22)	

ONE HUNDRED AND TWENTY REEL LIBRARY 33

China Grade 7

(Purchase No. 23)

Mediterranean Types (Snap Shots in Italy, Spain and
Monte Carlo) Grade 7

(Purchase No. 24)

As explained above, there are no available free films that correlate well with foreign subjects. When correlation is not necessary, free films may be selected from the list at the back of this book, to substitute for the foreign subjects above.

HISTORY

Abraham Lincoln First National Production (10 reels)
(Rental No. 150)

CITIZENSHIP

Romance of the Republic Series (Six reels from the complete series listed in Part II)

Department of Treasury
(Rental No. 151)

Department of War
(Rental No. 152)

Department of Navy
(Rental No. 153)

Department of Labor
(Rental No. 154)

Department of Post Office
(Rental No. 155)

Department of Interior

(Rental No. 156)

Available free films do not correlate with series above, but where correlation is not thought necessary, free films can be ordered from list at back of this book.

NATURE STUDY AND GENERAL SCIENCE

How Life Begins (4 reels)

(Free No. 267)

Substitutions:

(Free Nos. 256, 257, & 258)

The Four Seasons (4 reels)

(Rental Nos. 157, 158, 159, 160)

Substitutions:

(Free Nos. 259, 260, 261, & 262)

Secrets of Life Series (Tolhurst)

Our Six-Legged Friends (inflammable)

(Rental No. 161)

Living Natural History (Ditmars)

Planaria—Shellless Mollusks

(Purchase No. 25)

Living Natural History, is a remarkable scientific series of 42 reels, only one of which is given here, to acquaint schools with the series. All are listed in Chapter IX.

LANGUAGE AND LITERATURE

Opinions of educators differ widely on the merits of the film dramatizations that have been made of the works of standard English authors. Such films are

not included in these correlated courses, but are listed at the back of this book for ready reference.

VOCATIONAL

Many free films having a vocational bearing are distributed through these three film libraries, as substitutes for the rental or purchase films. A wide variety of other occupational films will be found listed under free films in Part II.

PHYSIOLOGY, HEALTH AND WELFARE

Circulation of the Blood

(Rental No. 162)

Good Teeth, Good Health

(Free 253)

Jinks

(Rental No. 163)

Substitutions:

(Free No. 264)

ATHLETICS

Fundamentals of Football (2 reels)

(Directed by Coach Rockne)

(Purchase No. 26)

Golfing with Bobby Jones (1½ reel)

(Rental No. 164)

Where special conditions in a course of study render the suggested substitutes unsuitable, the visual instruction committee may turn to the Comprehensive List of Educational Films, Part II, and there, under Free, Rental, or Purchase Films, find a wide range of other educational films from which to make appropriate selection. Some films marked "Rental" in the libraries, may be found in the free list of Part II with a designation, N. C. R. That is, the National Cash Register Company has purchased these, and now holds them for free distribution. However, they do not promise to have available a number of prints to meet concurrent calls, so it was thought best not to include their films in the libraries organized in this chapter.

Grades for which films are to be used, are not often designated in the film libraries, the reason having been stated in Chapter I. By previewing the film, the teacher can adapt the film lesson to the ages of the children. Films mentioned with grade designation are mostly in geography and history where custom has established fairly definite time units through the grades.



Courtesy of Educational Screen

SCENE FROM "EVE OF THE REVOLUTION," IN THE YALE CHRONICLES OF AMERICA PHOTOPLAYS—p. 42



Courtesy of Educational Screen

SCENE FROM "DIXIE" IN THE YALE CHRONICLES OF AMERICA PHOTOPLAYS—p. 52

CHAPTER III

DESCRIPTIVE LIST OF FILMS IN THE LIBRARIES

(Numbers, Titles, Addresses of Exchanges, Cost of Rentals and Purchases)

Information in the notes has been gathered from a wide variety of sources, too numerous to list in detail. Write direct to the film exchange for rates and dates. When films are to be used several days, it is customary to grant a reduced rental rate for all days after the first one. Always specify non-inflammable films when ordering.

FORTY REEL LIBRARY *

Purchase Films

1. CALIFORNIA'S WONDERS—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*†

Views of California scenery, famous the world over, are exhibited in this film. There are glimpses of Yosemite's Falls, the Three Brothers, the majestic El Capitan, the giant trees, and the picturesque religious ceremony held annually on Mt. Rubidoux—Lake

* Abbreviations occurring in this list (see beginning of Part II, p. 257, for a more extended list and additional details):

U. S. Ag.—United States Department of Agriculture, Washington, D. C.

Bu. Mines—U. S. Bureau of Mines, Pittsburgh, Pa.

N. C. R.—National Cash Register Company, Dayton, Ohio.

G. E.—General Electric Company, Schenectady, N. Y.

† The DeVry films are printed on receipt of order.

38 MOTION PICTURES FOR INSTRUCTION

Tahoe—Mt. Lassen—Mirror Lake—mountain skiing and tobogganing—Ostrich Farms. See Teachers' Leaflet, page 77.

2. FAIR FLORIDA—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Views of the Casino at Palm Beach—surf bathing—airplaning—the Royal Ponciana Hotel—the characteristic vegetation of Florida; orange groves, bananas, pineapples, melons, cocoanuts—views of an alligator farm. Teachers' leaflet.

3. ENCHANTING JAPAN—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

The gathering of the birds at the ringing of the temple bells—education of the geisha girls—jinrikishas—Cherry Blossom Festival—the sacred mountain of Japan, Mt. Fujiyama—other bits of Japanese scenery—a view of the great image of Buddha with its eyes of pure gold—workers in the rice fields—pearl divers—women at work coaling ships. Teachers' leaflet.

4. INDIA AND TIBET—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

The film brings before our eyes a wondrous panorama—the festivals, featuring elephants in rich oriental trappings—the weird burial customs of burning bodies on the ghats and scattering the ashes on the sacred Ganges—the mysterious temple dances of the Tibetan priests—the grotesque Devil Dances of the common people. The reel reaches its climax with the image of the incomparable Taj Mahal. Teachers' leaflet.

5. PALESTINE—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Glimpses of Bethlehem and Tiberius—distant and close-up views of Jerusalem, including the Mount of Olives, the Mosque of Omar, the Wailing Place of the Jews, and the Church of the Holy Sepulcher. Teachers' leaflet.

6. AMERICAN INDIANS AND THEIR ANCESTORS—\$65.00—*DeVry Negative Library.*

7. MAMMALS—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Animals in their native habitats and in captivity—buffalo—camels—caribou—deer—elephants—hippopotami—ground hog—porcupines—raccoons—sloth bear—kangaroos—lions—leopards—panthers—monkeys. Teachers' leaflet.

8. BIRDS—\$65.00 *DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Wild geese and duck—rarer birds like the cassowary and fishing cormorants—Australian crane—New Zealand ostrich—wedge-tailed eagle—the temple doves of Japan—the kiwi, the famous wingless bird of Australia. Teachers' leaflet.

9. DAIRYING—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Herds of Jersey, Guernsey and other breeds of dairy cattle—interior of modern barns—operation of mechanical milker. Teachers' leaflet.

10. MILK AS FOOD—\$60.00—*Ford Motion Picture Laboratories, Detroit, Mich.*

Choice herds of Holstein in sanitary barns—the proper way to keep milk healthful—testing milk for butter fat—pasteurization—composition of milk food.

11. WINTER SPORTS—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Skiing and tobogganning in Northern California—joy ride on a dog sled—snow fight—ice skating—sleigh ride—aqua-planing—a modern auto snow sled—winter sports in the White Mountains and Adirondacks. Teachers' leaflet.

Rental Films

While reels are offered from some sources for as low as \$1.00 and \$1.50 rental, the experience of all reliable

non-theatrical distributors is that a film rental business cannot be conducted where reels are rented at less than \$2.00 per reel. A rental rate of \$3.00 and \$4.00 per reel is not exorbitant, and productions of exceptional merit are justified in asking \$5.00. Theatres pay many times these rates.

Rates are based on the cost of production, cost of prints, cost of keeping prints in good physical condition, and the number of rentals. Endowed institutions can make better rates. Lower rates from commercial exchanges will mean as a rule, old prints in poor physical condition. Streaks, poor patches causing jumps, etc., on the screen, divert attention from the theme to the medium, and produce annoyance and waste of time. Old film not kept properly humidified, gets brittle and breaks easily in the projector, which frequently ruins the lesson. Old prints too frequently have ragged edges—broken sprocket holes—causing lost loops and breaks. It pays to deal only with reliable film exchanges. Even when this is done, poor prints slip by in the rewind and are sent out in poor condition without the knowledge of the manager. This is another reason for the teacher running the film through once before the class showing.

101. CALIFORNIA, THE GOLDEN STATE—\$4.00—*General Vision Company, 104 W. 42nd St., New York City.*

Characteristic features of a state that embraces the widest variety of climate, products and scenery.

102. GRAND CANYON OF ARIZONA—\$4.00—*General Vision Company, 104 W. 42nd St., New York City.*

A faithful depiction of one of the most interesting spots in the world.

103. SCHOOL DAYS IN JAPAN—\$2.50—*Fox Film Corporation, 55th St. & 10th Ave., New York City (Branches in principal cities).*

Glimpses of the educational system of a rising oriental state.

104. INDIA—\$4.00—*General Vision Co., 104 W. 42nd St., New York City.*

An orderly study of the general topography, peoples and customs of India, designed to accompany a regular geographic text.

105. JERUSALEM—\$5.00—*Pictorial Clubs, Inc., distributing through Pathé exchanges.*

This reel concerns itself mostly with the Jerusalem of the past and is a geographic-historical study.

106. FIRST AMERICANS—\$5.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

A picture comparison of the habits, life, religious ceremonies, and industries between the Indians of the Southwest and the Indians of the Plains. Most of the Pictures were made on the Blackfeet Reservation in Glacier National Park and in Arizona and New Mexico among the Pueblos. Some of the pictures show ancient cliff-dwellers.

107. LANDMARKS OF OUR FOREFATHERS—\$5.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

A picture of high educational value since it gives views of historic spots like Jamestown, Yorktown, and the scene of Cornwallis' surrender. There are diagrams to supplement the pictures.

108. NEW ENGLAND SHRINES—\$5.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

Plymouth Rock, Faneuil Hall, site of the Battle of Lexington, and homes of New England authors are shown, making the picture of value both to history teachers and teachers of literature.

109. EVE OF THE REVOLUTION—(3 Reels)—\$15.00—*Yale University Press Film Service, New Haven, Conn., and Pathé Exchange Inc., 35 W. 35th St., New York City (Branches in principal cities).*

An accurate three reel reproduction of the events preceding the Revolutionary War, such as the Boston Tea Party, the Boston Massacre, the Ride of Paul Revere, and the Battles of Lexington and Concord. Prepared at great expense under the supervision of the Yale University Press, these pictures are designed to illustrate the famous Yale Chronicles of History, and represent the highest point reached so far in the dramatic portrayal of historic events with a proper degree of authenticity.

110. IMMIGRATION—2 reels—*Neighborhood Motion Picture Service, 131 W. 42nd St. New York City.*

Two short reels from Wythe's Citizens In The Making—an original series of pedagogical film lessons, given in full with teachers' manual in Chapter V.

111. OUR FOUR-FOOTED HELPERS—(*Ruminants*)—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

This reel presents types of the ruminant family (animals that chew the cud). Studies of the common cow—zebu—buffalo—gnu—giraffe—dromedary—alpaca—llama. The studies of the deer family, especially the elk and reindeer are considered remarkable. A teachers' leaflet gives much additional information.

112. BIRDS OF PREY—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

Typical examples of this family—the crested auks—buzzards—goshawks—lammergeier—condors—eagles. Teachers' leaflet.

113. BRE'R RABBIT AND HIS PALS—(*Rodents*)—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

Habitats and appearance of rabbits, squirrels, prairie dogs, wood chucks, mice, jerboas, marmonts. The skeletal peculiarities of the rodent family are shown in close-ups and the facts of hibernation brought out in detail. Special teachers' leaflet with this film.

114. ANTS, NATURE'S CRAFTSMEN—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

The powers of the microscope are added to those of the moving picture camera in the magnification employed for the study of the community life of these tiny insects. The differences in structure between the queen, males, and workers are shown—close-ups of the ant-hill with its thousands of community workers—newly-born ants are shown under the care of the nurse ants—fighting and feeding habits. Special teachers' leaflet with this film.

115. HONEY-MAKERS—(*Bees*)—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

A similar study of the life and habits of the bee. One of the most valuable picture studies ever made of animal life. Special teachers' leaflet.

116. BABY SONGBIRDS AT MEAL TIME—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City (Branches in principal cities).*

An untechnical treatment of young birds at meal time—charming and unique.

117. *PIED PIPER*—\$2.00—*George Kleine*—49 W. 45th St., New York City.

This film, illustrating Robert Browning's poem, is inserted more as a delightful interlude in nature study, rather than as a nature study in itself. It cannot be called a "rat film" although there are rats in it.

- | | |
|-----------------|--|
| 118. IRVING | } \$5.00 per reel— <i>Pictorial Clubs, Inc., Distributing Through Pathé Exchanges.</i> |
| 119. COOPER | |
| 120. BYRANT | |
| 121. WHITTIER | |
| 122. LONGFELLOW | |

These well-known numbers of the American Author Series, produced by Urban, contain excellent biographical and literary studies of the authors named. As a rule, each reel includes a dramatization of one of the best known of the author's works.

123. *THRU LIFE'S WINDOWS*—\$5.00—*American Motion Picture Corporation*, 126 W. 46th St., New York City (*Branches in principal cities*).

Natural study, mainly by animated diagrams, of the structure of the eye and its care. The defects of sight are illustrated and their correction.

124. *GRIDIRON GLORY*—\$4.00—*Pathé Exchange, Inc.*, New York City (*Branches in principal cities*).

This film shows the training necessary for modern football efficiency. The pictures were taken at several American colleges.

125. *SWIFT AND STRONG*—\$4.00—*Pathé Exchange, Inc.*, New York City (*Branches in principal cities*).

The still motion picture is used to good advantage in this reel to show good running form and the details of motion involved in hurdling, pole-vaulting, discus throwing, and broad jumping.





STILL FROM "OUR CHILDREN," A FILM PRODUCED BY THE U. S. CHILDREN'S BUREAU—
p. 47

Free Films

201. SENTINELS OF THE SUNSET—*Forest Service*—* *Office of Motion Pictures, Extension Service, U. S. Ag., Washington, D. C.*

Views of Mt. Lowe and Mt. Wilson, California, including the observatory. Municipal camps maintained by cities for auto travelers are interesting features.

202. WONDERLAND OF CANYONS—*Forest Service*—*U. S. Ag., Washington, D. C.*

Scenes in the national forests of Colorado—the Royal Gorge—Leadville—Lake Creek—the Mountain of the Holy Cross—general views of the Continental Divide.

203. YELLOWSTONE—*Northern Pacific Ry., St. Paul, Minn.*

A classic film of this wonderful park, showing geysers in action, the Grand Canyon of Yellowstone, and many other interesting and unique scenes.

204. CITRUS FRUIT IN FLORIDA—*2 reels*—*U. S. Ag., Washington, D. C.*

Methods of management in orange groves and grapefruit groves of Florida; preparation of the fruit for shipment.

205. CUBA, THE ISLAND OF SUGAR—*2 reels*—*G. E., Schenectady, N. Y.*

The largest sugar mill in the world; scenes in and around Havana.

* The United States Department of Agriculture deposits large groups of its films with the Extension Departments of a number of state universities and agricultural colleges. (See list in Chapter IX). Frequently time and transportation charges can be reduced by dealing with the nearest state institution.

206. THE PREHISTORIC BANDELIER (*Cliff-Dwellers*)—2 reels—*U. S. Ag.*

Views of the Santa Fé National Forest which contains more than 20,000 cliff-dwellers—ancient and modern Indian pueblos.

207. TOURING WITH THE GRANGERS—*first reel*—*U. S. Ag., Washington, D. C.*

Automobile tour of the National Grangers—visits to West Point—Newport—Plymouth Rock—Provincetown—the mountains of Vermont—Niagara Falls.

208. TOURING WITH THE GRANGERS—*second reel*.

209. IN OLD QUEBEC—*Can. M. P., Ottawa, Canada, or Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, and 120 W. 41st St., New York City.*

This quaint and historical city is full of pictures for the students of American history. All of the interesting features are given in this film.

210. WHITE PINE, BEAUTIFUL AND USEFUL—*U. S. Ag., Washington, D. C., or Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, and 120 W. 41st St., New York City.*

The uses of white pine; some of the famous houses in New England that are built of it; also scenes in Washington and Mt. Vernon.

211. UNDER THE GREAT STONE FACE (*White Mountain*)—*U. S. Ag., Washington, D. C., Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, and 120 W. 41st St., New York City.*

White Mountain National Forest, including the famous "Old Man of the Mountains."

212. AN AMERICAN IN THE MAKING—*Bu. Mines, Pittsburgh, Pa.*

Americanization, industrial safety and welfare.

213. OUR CHILDREN—*U. S. Labor Bureau, Washington, D. C.*

The Children's Bureau of Health of the U. S. Department of Labor starts its beneficent work in a small town; proper methods of weighing, measuring and examining babies are shown.

214. WHEN ELK COME DOWN—*U. S. Ag., Washington, D. C.*

The forest ranger gets after the elk poacher on the snow-covered mountains of the Absaroka National Forest.

215. BIRD AND ANIMAL LIFE OF YELLOWSTONE—*Northern Pacific Railway, St. Paul, Minn.*

The Yellowstone subject previously mentioned deals mainly with the scenic features of the park, and this reel devotes itself principally to deer, bears, buffalo, birds, etc., of the region, although containing generous portions of the scenic marvels.

216. MODERN PIED PIPER—*2 reels—U. S. Ag., Washington, D. C.*

The old tale of the Pied Piper is suggested in this film, but the emphasis is put on modern methods of rat control and extermination.

217. BEES: HOW THEY LIVE AND WORK—*U. S. Ag., Washington, D. C.*

Bees at work gathering honey—beehive—queen bee laying eggs—life habits of this wonderful insect.

218. NATIONAL BIRD REFUGES—*U. S. Ag., Washington, D. C.*

National bird refugees on islands in the Gulf of Mexico; pelicans, terns, laughing gulls and other interesting birds.

219. ROADS TO WONDERLAND—*U. S. Ag., Washington, D. C.*

Roads near Mt. Hood in Oregon National Park—Crater Lake

and Yosemite National Park—unusual Western scenery—splendid examples of modern road building.

220. TRAILS THAT LURE (*Columbia River Region*)—*U. S. Ag., Washington, D. C.*

Views of the Columbia River Gorge and wonderful Eagle Creek road to Wahtun Lake in Oregon National Forest.

221. LITTLE JOURNEYS IN COLORADO—*U. S. Ag., Washington, D. C.*

From Denver and Colorado Springs into the national forests; the views include Pike's Peak, the Garden of the Gods, Manitou, and Carol Lake.

222. HITTING THE HIGH SPOTS (*White Mountains*)—*U. S. Ag., Washington, D. C.*

Scenic wonders of the White Mountain National Parks—camping and hiking scenes.

223. SHE 'S WILD—*U. S. Ag., Washington, D. C.*

Broncho Busting—roping—tying—other cowboy feats—Indian dances.

224. GREAT DAIRY SIRES AND THEIR DAUGHTERS—*U. S. Ag., Washington, D. C.*

Types of great dairy sires and their offspring.

225. GARDEN GOLD—*U. S. Ag., Washington, D. C.*

How a golfer becomes a gardener; community gardens in America for health and profit.

226. UNCLE SAM, CHAMPION FARMER—*U. S. Ag., Washington, D. C.*

Little cross sections of the farming industry in the U. S., including the growing of crops, fruit and live stock.

227. WIZARDRY OF WIRELESS—2 reels—*G. E., Schenectady, N. Y. (Branches in principal cities).*

The historical development of communication to distances. The old beacon light—the Indian smoke blanket—operation of the heliograph—semaphore and wig-wagging—electric telegraph and telephone—animated drawings of the function of the vacuum tube and other radio parts.

228. BUICK HIGH SPOTS—*Buick Motor Co., Flint, Mich.*

The construction of a well-known American automobile.

229. MILK, NATURE'S PERFECT FOOD—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

The composition and value of milk as food and sanitary methods of storing and distributing it. A truly educational film.

230. THE POINT OF VIEW—*American Optometric Association, 523 4th Ave., Louisville, Ky.*

The science of optics as illustrated by the human eye. Educational diagrams make this a very instructive film.

231. KING SNOW HOLDS COURT—*U. S. Ag., Washington, D. C.*

Winter sports in the White Mountains—skiing, skating, etc.,—scenery of the White Mountains.

232. FIELD DAY SPORTS—*Illinois Steel Co., Dept. of Safety, 208 S. LaSalle St., Chicago, Ill.*

A typical celebration at a modern commercial plant under the auspices of its welfare organization.

EIGHTY REEL LIBRARY

Purchase Films

12. AUSTRALIA AND NEW ZEALAND—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

The tree ferns and eucalyptus forests of Australia—a eucalyptus forest on fire—some of the queer wild animal life of Australia—views in the sheep country—the boiling mud springs and the Roturua hot pools in New Zealand—the Helvetia Ostrich Farm—Maori customs—shooting the rapids of the Wanganui, the Rhine of New Zealand. Teachers' leaflet.

13. RICE AND COPRA IN THE PHILIPPINES—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Cocoanut from the nut to the finished copra—rice terraces of the Ifuagos—women at work in the paddy fields—transplanting, cultivating and harvesting rice. Teachers' leaflet.

14. FILIPINO PRIMITIVES—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

IGOROTE—Dog market—Igorote government railroad employees—gathering bamboo shoots—Benguet Igorote dance and ceremonial feast—using the spear and head ax—Igorote musicians.

IFUAGOS—An Ifuagan dance, hunt and feast—Ifuagans at work.

MOROS—Moro beauties and spearmen—Moro boy divers—Moro dance—battle between spearmen at Mindanao.

NEGRITOS—Use of bow and arrow—Negrito dance.

Teachers' leaflet.

15. EVOLUTION OF TRANSPORTATION (*Land*)—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

From the elephants and camels of the east to automobiles and railway palaces.

16. EVOLUTION OF TRANSPORTATION (*Water*)—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

From African war canoes to the modern battleship.

17. REPTILES—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Rattlesnakes rattling and striking—feeding a python—battle between a cobra and a mongoose—a turtle farm and tortoise market—close-up of alligators. Teachers' leaflet.

18. DANCES OF MANY NATIONS—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Dance of an Indian girl—Indian war dance—Pageant of the Seasons—the Cuico, the national dance of Chile—Korean dances—nautch dancing girl of India; the dance in Kandy, Ceylon—the devil dances of Tibet and the temple dances of the lama priests—Italian and Javanese dances—the knife dance of Lake Bagendits; dances of the geisha girls—dances of the Filipino primitives—hula-hula dance of Honolulu—the Bisherene dance of Egypt—the Oopa-Oopa dance of Tahiti. Teachers' leaflet.

19. CORRECTIVE GYMNASTICS—\$60.00—*Visual Text Book Publishers, 212 W. 11th St., Los Angeles, Calif.*

A much neglected phase of athletic training, with exercises designed for the development of the average student rather than the athlete; a very helpful series under the direction of Professor LaPorte of the Department of Physical Instruction, University of Southern California.

Rental Films

126. ATHENS THE GLORIOUS—*Pathé Color—\$5.00—Pathé Exchange, Inc., 35 W. 35th St., New York City.*

A picture of this wonderful city in color, produced under the

suggestion of the department of classical art of the Metropolitan Museum of Art.

127. THE ANCIENT DUCHY OF BRITTANY (*France*)—
\$5.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City.*

Beautiful color views of the most picturesque province of France, linked with French history and literature.

128. THREE ANCIENT CITIES OF FRANCE—\$5.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City.*

In color; Arnes, Avignon, and Carcassone, all famous in French history; includes villages and castles in the Pyrenees.

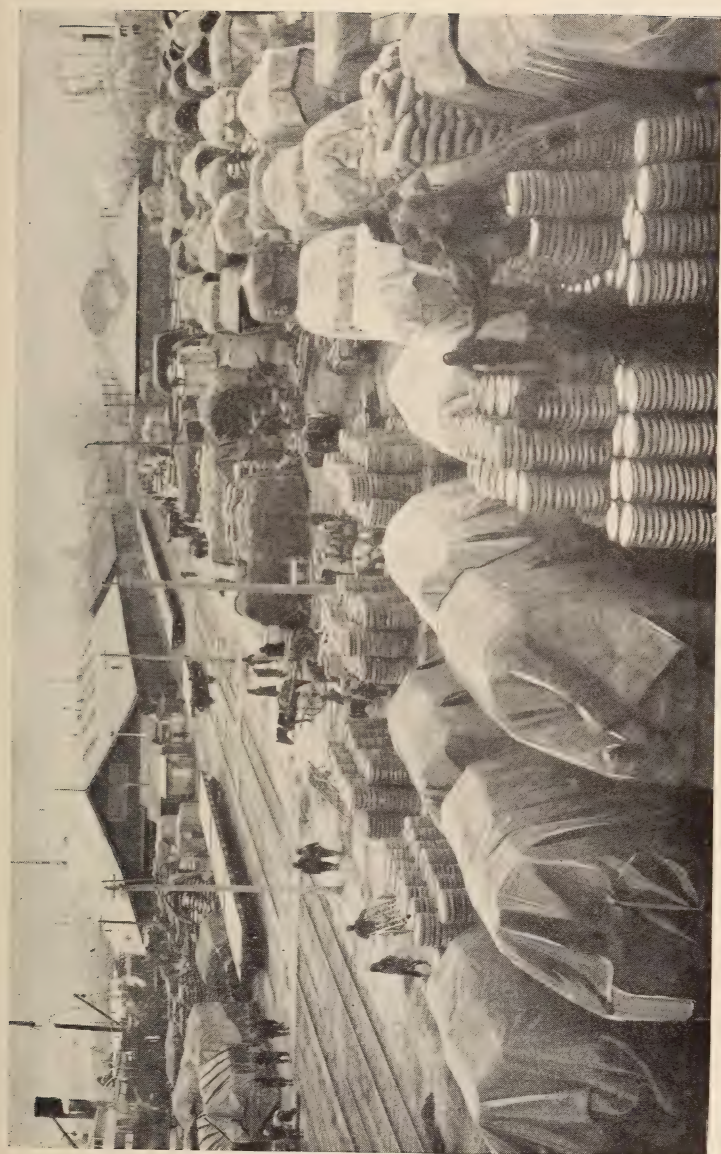
129. EAST IS EAST (*Northern Africa*)—\$5.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City.*

Tunis; views of the street and home life—desert scenes and oases in the vicinity. In Pathé color.

130. DIXIE—3 reels, \$5.00 per reel—*Yale—Pathé Exchange, Inc., 35 W. 35th St., New York City.*

Scenes of sacrifice in the south during the Civil War, with a realistic presentation of the meeting of Grant and Lee at Appomattox.

Chronicles of America Photoplays, produced by the Yale University Press Film Service, are designed to form companion series of illustrations to the well known Chronicles of America issued by the Yale University Press. It was a great day for American history classes and for the introduction of scholarship into the movies, when this great series was decided upon. The auspices under which these pictures were made justifies our departure from our rule of one and two reel productions. As these photoplays rent for \$5.00 per reel, it would be well to arrange a special schedule for their showing, so that more than the usual time may be given to their presentation and to the follow-up work which should accompany the exhibit. While only one of these subjects is in our Eighty Reel Library and



Courtesy of South Manchuria Railway

SCENE OF OUTDOOR STORAGE AT DAIREN PORT, MANCHURIA, FROM "THRU THE OPEN DOOR OF MAN-
CHURIA"—p. 57

another, "On the Eve of the Revolution," in the 120 Reel Library, wherever more time and money can be afforded by the school, we strongly recommend the inclusion of as many of the rest of the series as possible. The fifteen photoplays which have been so far completed are included in the Comprehensive List in Part II. Thirty-three plays are planned in the complete series. Some of these plays are not free from theatrical effects, but theatrical presentation had to be considered along with the school showings in order to get some sort of financial aid for the immense outlay involved.

131. EVOLUTION OF TRAVEL—\$5.00—*General Vision Co., 104 W. 42nd St., New York City.*

A bird's-eye view of the long road the race has traveled in reaching the modern transportation facilities of today.

132. RAILROADS IN UNITED STATES HISTORY—*Society of Visual Education, 327 S. LaSalle St., Chicago, Ill.*

The development of our railway systems, and the part they played in our economic growth.

133. THE CALL TO ARMS—2 reels, \$5.00 per reel—*Lincoln Cycle—American Motion Picture Corp., 1260 W. 46th St., New York City.*

One of the pioneer attempts to produce a series of motion pictures of a serious educational purpose, suitable for classroom and assembly room presentation, was the series known as "The Son of Democracy" or sometimes called "The Lincoln Cycle," written, directed, and produced by Benjamin Chapin, who takes the leading rôle. Mr. Chapin had for years enacted the life of Lincoln from the lecture platform, and his remarkable likeness to the Great Emancipator made him manifestly fitted to undertake this task. The series is variously edited in from eight to ten chapters of two reels, each chapter forming an episode complete in itself. Only one of the Lincoln Cycle is selected for the Libraries in order to acquaint the schools with the general character of the series. The equally remarkable First National Picture "Abraham Lincoln" is used in the

120 Reel Library, so that the Lincoln topic is fully treated from another angle.

134. **THE REAL ROOSEVELT**—2 reels—\$5.00 per reel—*Bureau of Commercial Economics, Washington, D. C. Can be secured free from the Motion Picture Bureau National Council, Y. M. C. A, 1111 Center St., Chicago, and 120 W. 41st St., New York City.*

Roosevelt as a colonel in the Spanish-American War with his rough riders—as police commissioner of New York City and Governor of New York State—later as Vice-President and President of the United States. New prints of this subject are difficult to secure. The Y. M. C. A. Motion Picture Bureau can furnish substitutes (rentals) from its new Roosevelt series listed in Part II, pages 396-370.

- 134A. **AMERICAN IDEALS**—\$5.00—*Neighborhood Motion Pictures Service, Inc., 131 W. 42nd St., New York City.*

One of Wythe's Citizenship Films, dealing with the initiation of an immigrant family into the ideals of American citizenship. The citizenship reels for the Libraries were printed before it was certain that the Wythe films would be released on a general rental basis; otherwise more of these would have been included. The remainder of them will be found in the Comprehensive List of Educational Films in Part II under the subject of "Citizenship."

135. **MOULDERS OF MANHOOD**—\$5.00—*Pictorial Clubs, Inc., Distributing Through Pathé Exchanges.*

The scene is laid at a conference of the Boy Scout executives of the United States; many of the most influential citizens of America are shown in this film; the famous scout, Dan Beard, and Ralph Hubbard, at the close of the meeting, stage an interesting episode from pioneer days.

136. ADAPTATION (*Animal Camouflage*)—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City.*

The protective mimicry of nature. Crabs—worms—the walking stick—caterpillars—toads—lizards—butterflies—the praying mantis.

137. MOLLUSCS—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City.*

Studies of the oyster, octopus, cuttle fish and snail; a Pathé screen study with teachers' leaflet.

138. CRAYFISH—\$4.00—*Pathé Exchange, Inc., 35 W. 35th St., New York City.*

Selected by many as a type study, the crayfish is of great interest to zoölogy classes. Also, scenes of the stickleback which has the unusual characteristic of being a fish that builds a nest. The picture shows the nest with the eggs in it and the male guarding it. A Pathé screen study with teachers' leaflet.

139. BIRDS OF PASSAGE—3 reels, \$4.00 per reel—*Pathé Exchange, Inc., 35 W. 35th St., New York City.*

A study of the bird migration that has been called remarkable by scholars as well as theater audiences. The bird studies were made by Bengt Berg of the birds of northern Europe on their annual migration down the Nile to Abyssinia. Here again special schedule should be made for this three reel picture.

140. HOLMES—\$4.00—*Pictorial Clubs, Inc., Distributing Through Pathé Exchanges.*

Oliver Wendell Holmes is the first of Urban's Great American Author Series, its general plan being the same as that for Lowell, Poe, Twain, and Whitman below. The high spots in the author's biography are first shown and then a dramatization of one or two of his most popular poems.

141. LOWELL—\$4.00—*Pictorial Clubs, Inc., Distributing Through Pathé Exchanges.*

56 MOTION PICTURES FOR INSTRUCTION

142. POE—\$4.00—*Pictorial Clubs, Inc., Distributing Through Pathé Exchanges.*
143. TWAIN—\$4.00—*Pictorial Clubs, Inc., Distributing Through Pathé Exchanges.*
144. WHITMAN—\$4.00—*Pictorial Clubs, Inc., Distributing Through Pathé Exchanges.*
145. HOW WE BREATHE— $\frac{1}{2}$ reel—\$1.50—*Bray Productions, 120 W. 142nd St., New York City.*

This short reel uses the well-known Bray method of animated diagram and phantom view to show the bodily operations involved in breathing.

146. HOW WE HEAR— $\frac{1}{2}$ reel—\$1.50—*Bray Productions, 120 W. 142nd St., New York City.*

Another very short reel of the same general character.

Free Films

233. CROSSING THE ATLANTIC—*Pathescope Co. of America for White Star Line, Aeolian Bldg., New York City.*

The steamer Olympic enroute from New York to Europe—passengers engaged in sports on deck—tennis, shuffle board—swimming in the ship's pool—squash games—gymnasium scenes—and children riding bicycles—other scenes on the great liner—the ball room. Produced by the White Star Line.

234. FROM TROPIC ISLES (Coconuts)—*Franklin Baker Company, 15th and Garden Sts., Hoboken, N. J.*
The coconut industry.

235. IN GULFS ENCHANTED—*Pathescope Co. of America for White Star Line, Aeolian Bldg., New York City.*

A trip on the Megantic—Cuba—Jamaica—Panama Canal—the coast of Venezuela—the island of Trinidad with the great asphalt bogs—various islands of the West Indies. An entertaining film containing beautiful photography.

236. PANAMA CANAL—2 reels—*G. E., Schenectady, N. Y.*

The actual construction of the Panama Canal, as well as the completed work—following a ship through the locks from ocean to ocean.

237. THE LONE ASIAN TRAVELER—*Atlas Educational Film Co., Oak Park, Ill., and Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill.*

A fanciful and scenic introduction leading up to the manufacture of cheese.

238. THRU THE OPEN DOOR OF MANCHURIA—2 reels—*S. Manchuria Railway Co., 1111 Broadway, New York City.*

Rare views of a little known country.

239. A LETTER TO DAD—*U. S. Ag., Washington, D. C.*

A typical Boys' and Girls' Club champion encampment at Sioux City, Iowa—one of the boys writes home to father and tells him of the many interesting things he has learned during the encampment.

240. BOY PROBLEM SOLVED—*N. C. R., Dayton, O.*

Methods used and results obtained by John H. Patterson of Dayton, Ohio, in his boy welfare work—keeping them off the streets—useful and interesting labor—clean recreation—the development of civic pride.

58 MOTION PICTURES FOR INSTRUCTION

241. THE 4-H CAMP FOR BOYS AND GIRLS—*U. S. Ag., Washington, D. C.*

4-H means Head, Heart, Hand and Health—the Boys' and Girls' Club Camp where they learn better farming and home-work.

242. THE MOST WONDERFUL INSECT IN THE WORLD—*CICADA—U. S. Ag., Washington, D. C.*

The cicada, or seventeen year locust—its mysterious disappearance under the ground and reappearance seventeen years later.

243. HARVEST OF THE SEA—*Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill., and 120 W. 41st St., New York City.*

Thrilling pictures of deep-sea fishing.

244. ANNE'S AIGRETTE—*U. S. Ag., Washington, D. C.*

The egrets have been nearly exterminated by plume hunters the plumes being used largely for ladies' hats—the egrets in a federal bird refuge.

245. WATCHING THE WEATHER—*U. S. Ag., Washington, D. C.*

Concrete lessons on how the air is charted by the weather bureau.

246. BILL JONES, CHAMPION—*U. S. Ag., Washington, D. C.*

Reminiscences of a club champion on his return from the Boys' and Girls' Club Encampment.

247. INSIDE OUT—*Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill., and 120 W. 41st St., New York City.*

The story of digestion told in wonderful animated diagrams and

phantom views—what happens to food during the process of digestion—all the organs of the body concerned are seen at work. A Rowland Rogers film; can also be rented from the Rowland Rogers Studios, 71 W. 23rd St., New York City.

248. REVELATIONS—*G. E., Schenectady, N. Y.*

A classic example of the contribution of commercial firms to education—the manufacturing of x-ray tubes and picturization of the action of the x-rays themselves—wonderful views of what they accomplish in the location of foreign bodies in the human body and of the use of x-rays in medical and dental science.

249. ONE SCAR OR MANY—*Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill., and 120 W. 41st St., New York City.*

Many people oppose vaccination because they do not understand the principle on which it is founded. This health reel had the careful supervision of Dr. Roseneau of Harvard University.

250. WORKING FOR DEAR LIFE—*Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill., and 120 W. 41st St., New York City.*

Shows the value of periodical health examinations as instituted by various life insurance companies of this country.

251. FIELD DAY SPORTS—*Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill., and 120 W. 41st St., New York City.*

A track meet and various other athletic events are put through by the employees of the Illinois Steel Company under the direction of the Department of Safety and Relief.

ONE HUNDRED TWENTY REEL LIBRARY

Purchase Films

20. PHILIPPINES AND MANILA—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

The Harbor of Manila—San Juan and old Fort Santiago—views of the Bridge of Spain and the Normal High School, in Manila—scenes on the Escolta and Pasig River. Teachers' leaflet.

21. WORK AND PLAY IN THE PHILIPPINES—\$65.00—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Filipino women embroidering, weaving, making lace and baskets—cutting, barking and stripping hemp—building a bamboo bridge—horse races, cock fights and caribou fights—a savage Sulu dance. Teachers' leaflet.

22. JAVA—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Planting and harvesting rice in Java—the Batik industry—a seller of sarongs—tying the sarong—coconut hats and dry-goods dealers—a country fair of Garoet; kite-time in Java—Djogkarta, Javanese dance and orchestra—Javanese fisherman—picking water lilies—volcanic craters and boiling pools—hot geysers—Boro-Boedoer Temple—a Javanese funeral and a comic opera performance—the knife dance with music by an Aulong bamboo. Teachers' leaflet.

23. CHINA—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

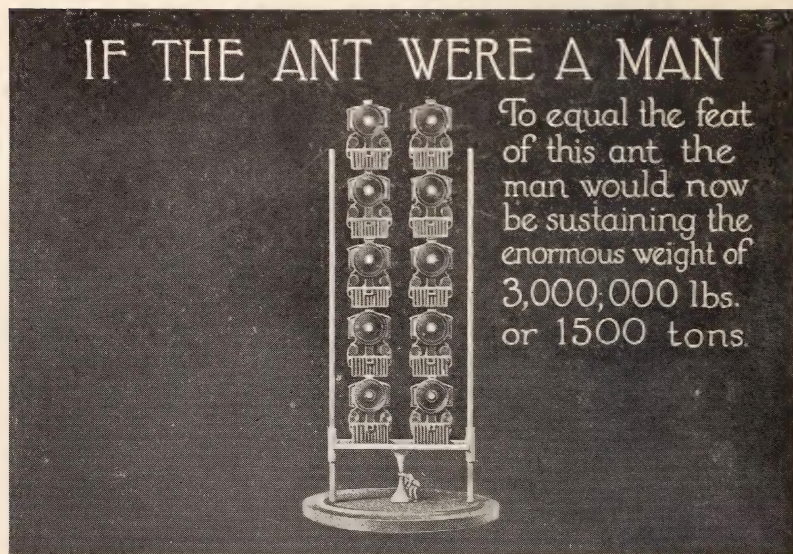
The reel opens with examples of the cheap labor of the Orient—loading ships on the Bund—unloading tea from junks—loading bananas—boat life around Canton and the Pearl River—views of the Great Wall of China—the Temple of Heaven—Hall of Classics





Courtesy Educational Pictures Corp.

"THIS ANT IS UPHOLDING 3,000,000 TIMES ITS OWN WEIGHT"



Courtesy Educational Pictures Corp.

TWO SCENES FROM "OUR SIX-LEGGED FRIEND"—p. 64

—the Camel Back ridge—the Camel Gate and a Chinese funeral procession—grinding flour in north China with the primitive stone mill. Teachers' leaflet.

24. MEDITERRANEAN TYPES—*DeVry Negative Library, 1111 Center St., Chicago, Ill.*

Views of Sicily—Italian dances—the Messina earthquake—Piazza of St. Peter at Rome and the Fiesta de Agatha—sunset on the Bay of Naples—Monte Carlo—Gibraltar—Egyptian scenes—Cairo—the Nile River and Assouan Dam—scenes in the Libyan Desert—Algeria. Teachers' leaflet.

25. LIVING NATURAL HISTORY—PLANARIA—*Raymond L. Ditmars, c/o New York Geographical Society, New York City.*

The thirty-ninth in the series "Living Natural History." This particular reel was prepared under the direction of the Marine Biological Station at Naples. The complete series, consisting of forty-two reels, is noteworthy because of its strict scientific classifications as followed in most zoölogy classrooms. The series includes: (1) Mammals, with the subdivisions of Primates, Carnivora, Rodents, Ungulates, and Marsupials; (2) Birds, with four subdivisions; (3) Reptiles, with seven subdivisions; (4) Amphibians, with two; (5) Insects, with eight; and (6) Marine Life, with four. As this series is for sale at \$100.00 per reel, rather than rent, it was felt that but one or two examples could be included for purchase in the small film libraries arranged in Part I. The complete list is given under Purchase Films in Part II.

26. FUNDAMENTALS OF FOOTBALL—2 reels—\$120.00—*Visual Text Book Publishers, 212 W. 11th St., Los Angeles, Calif.*

A splendid example of motion pictures applied to a definite part of college work. Coach Rockne of the University of Notre Dame has personally supervised these reels, showing the exact system he uses in coaching the fundamentals of football; forty-

three different units of football training are exhibited by means of slow motion, suspended animation, and animated charts, as well as the usual photographic process. Other athletic reels of the Visual Text Book Publishers are listed under Purchase Reels in the second part of this book.

Rental Films

THE UNITED STATES—A TEN TALENT NATION—\$5.00
per reel—*American Motion Picture Corp., 126 W.
46th St., New York City.*

This series consists of twelve reels on geography and are an ambitious attempt to furnish the school with authoritative pedagogical material, executed with advanced technic. As they are \$5.00 per reel, it was felt that only three or four of them could be included in the Library. These are: (1) Soil, (2) Water, and (3) Minerals. However, the complete list is given in Part II under Rental Films for such as can afford the series.

147. NATURAL RESOURCES—SOIL—\$5.00—*American Motion Picture Corporation.*

148. NATURAL RESOURCES—WATER—\$5.00—*American Motion Picture Corporation.*

149. NATURAL RESOURCES—MINERALS—\$5.00—*American Motion Picture Corporation.*

150. FORMATION OF VOLCANOES AND GEYSERS—\$2.00—
*Society for Visual Education, 327 S. LaSalle St.,
Chicago, Ill.*

A representative of a long list of pioneer educational reels produced by this firm. Animated diagrams, and actual motion pictures of volcanoes and geysers. See fuller list of their films in Part II.

151. ABRAHAM LINCOLN—10 reels—*First National Pictures, Inc., 383 Madison Ave., New York City, and 831 S. Wabash Ave., Chicago, Ill.*

This film, distributed by First National and produced by Al and Ray Rockett, has been hailed everywhere as the finest screen presentation of the life of the Great Emancipator. The theatrical has been subordinated to a picturization of real life and the action and environment are characterized throughout by simplicity and sincerity. Although this is a long feature picture, it is recommended here for classroom and assembly room presentation, but when it is used a special schedule of the classes interested should be arranged to permit of the proper follow-up work.

- Romance of the Republic Series—\$4.00 per reel—*General Vision Co., 104 W. 42nd St., New York City.*

A serious attempt to objectify the work of the United States Government in the various executive departments. One reel is given to each of the following departments: Treasury, State, War, Navy, Justice, Labor, Post Office, Agriculture, Interior, and Commerce. These are \$4.00 per day per single reel, but when the entire series is rented, the cost is somewhat less. Six of these departmental studies are given below and the complete series is listed under Rental Films in Part II.

152. DEPARTMENT OF TREASURY—\$4.00—*General Vision Co.*
 153. DEPARTMENT OF WAR—\$4.00—*General Vision Co.*
 154. DEPARTMENT OF NAVY—\$4.00—*General Vision Co.*
 155. DEPARTMENT OF LABOR—\$4.00—*General Vision Co.*
 156. DEPARTMENT OF POST OFFICE—\$4.00—*General Vision Co.*
 157. DEPARTMENT OF INTERIOR—\$4.00—*General Vision Co.*

The Four Seasons—\$5.00 per reel—*Pictorial Clubs, Inc., Distributing Through Pathé Exchanges*

The producers state that the four reels of this feature production can be shown in serial form, covering a period of two or four weeks. Here the changing world of nature is presented through the year in one hour. The picture created a sensation even in the theatres when it was first presented and undoubtedly is one of the greatest educational features ever produced. As indicated, these can be rented one reel at a time or all together.

- | | |
|--|--------------------------|
| 158. FALL—\$5.00— <i>Pictorial Clubs, Inc.</i> | } <i>Pathé Exchanges</i> |
| 159. WINTER—\$5.00— <i>Pictorial Clubs, Inc.</i> | |
| 160. SPRING—\$5.00— <i>Pictorial Clubs, Inc.</i> | |
| 161. SUMMER—\$5.00— <i>Pictorial Clubs, Inc.</i> | |

Secrets of Life Series—\$5.00 per reel—*Educational Film Corporation 729 7th Ave., New York City.*

This series, made by Tolhurst, is another achievement in scientific photography to which visual educationists are proud to point as an example of the definite educational value of motion pictures under classroom conditions. Only one of the series is included in the Libraries, but the complete set is listed in Part II under Rental Films.

162. OUR SIX LEGGED FRIENDS—\$5.00—*Educational Film Corp.*

163. CIRCULATION OF THE BLOOD—1 reel—\$4.00—*General Vision Co., 104 W. 42nd St., New York City.*

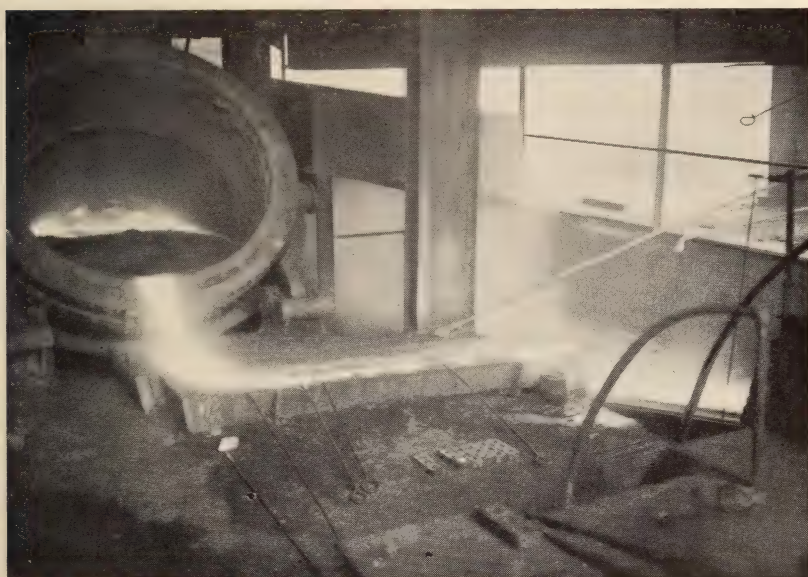
A well authenticated picturization of actual blood circulation under the microscope, for use of schools. There is a two reel version also.

164. "JINKS"— $\frac{1}{2}$ Reel—60 cents—*National Tuberculosis Association, 370 Seventh Ave., New York City.*



Courtesy of American Rolling Mills Co.

SCENE FROM "MANUFACTURE OF ARMCO INGOT IRON"—p. 65
Molten iron pouring from open hearth furnace just after tapping



Courtesy of American Rolling Mills Co.

SCENE FROM "MANUFACTURE OF ARMCO INGOT IRON"—p. 65
Upturned blast furnace ladle pouring igneous iron into "pig" molds

A novel picture of cartoon effects, showing how persistency will overcome a tendency toward tuberculosis and build up a complete cure.

165. GOLFING WITH BOBBY JONES— $1\frac{1}{2}$ Reel—\$2.50—*Pictorial Clubs, Inc., 350 Madison Ave., New York City, and 808 S. Wabash Ave., Chicago, Ill.*

The leading strokes of a famous golf champion.

Free Films

252. LIMESTONE FOR AILING CLOVER—*U. S. Ag., Washington, D. C.*

For students of soil and agriculture.

253. GOOD TEETH, GOOD HEALTH—*Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill., and 120 W. 41st St., New York City.*

A fine example of how motion picture propaganda can make good health habits attractive to young people.

254. WHITE COAL—2 reels—*G. E., Schenectady, N. Y.*

Water power and its combination with electrical energy in many applications to industrial life.

255. MANUFACTURE OF ARMCO IRON—2 reels—*American Rolling Mills Co., Middletown, Ohio.*

An unusually vivid and successful representation of processes difficult to photograph.

256. EMBRYOLOGY OF THE EGG—*U. S. Ag., Washington, D. C.*

The beginning of life—fertile and infertile eggs—applications to poultry raising.

257. BEYOND THE MICROSCOPE—*G. E., Schenectady, N. Y.*

The decomposition of water into hydrogen and oxygen. Animated drawings represent the atoms which make up the hydrogen and oxygen; molecules, nuclei, electrons, ions, etc.—what happens when water freezes or is formed into snow-flakes.

258. LAST DAYS OF THE PRAIRIE DOG—*U. S. Ag., Washington, D. C.*

The life and habits of an interesting animal in Arizona; the damage he does to farming and the work of the Government in the extermination of the pests.

259. WHEN NORTH WINDS BLOW—WHITE MOUNTAINS
—*U. S. Ag., Washington, D. C.*

A winter carnival in the White Mountain National Parks.

260. APPLE BLOSSOM TIME IN THE LAND OF EVANGELINE
—*Can. M. P., Ottawa, Canada.*

The apple industry in the Annapolis Valley in Nova Scotia, the Land of Evangeline.

261. SUMMER CAMPS—VACATION DAYS IN THE NATIONAL
FORESTS—*U. S. Ag., Washington, D. C.*

Boy Scouts on the Santa Fé and Oregon.

262. WHERE NATURE SMILES—*Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill., and 120 W. 41st., New York City.*

The Niagara fruit district in Canada—beautiful scenes of the trees in blossom—picking and distribution of the fruit.

263. ORAL HYGIENE—2 reels—*Colgate & Co., New York City.*

The care of the teeth, with but little objectionable advertising.

264. AWAKENING OF JOHN BOND—*New York Bureau of Health, 136 Center St., New York City.*

The gradual transformation of a miserly landlord into a considerate human being in his relations with his tenants.

265. YELLOWSTONE NATIONAL PARK—*Northern Pacific Railway, St. Paul, Minn.*

Scenic beauties as observed in the regular four and a half day trip of the tourist. The bird and animal life of the Park is shown in another reel issued by the same company.

266. CONQUEST OF THE FOREST—*G. E., Schenectady, N. Y.*

This shows the great forests of Oregon and Washington, and the logging and other operations performed in converting trees into lumber—thoroughly educational.

267. HOW LIFE BEGINS—4 reels—*Y. M. C. A. Motion Picture Bureau, 1111 Center St., Chicago, Ill., and 120 W. 41st St., New York City.* (This film obtainable free from Y. M. C. A. New York address only, but it can be rented from the Carter Cinema Production Corp., c/o Evans Film Laboratories, 1476 Broadway, New York City.)

One of the earliest and best of the biological films. The complete life cycles of the sweet pea, frog, butterfly, chick and white rat.

268. A WOOLEN YARN—*G. E., Schenectady, N. Y.*

The wool industry. The shearing of the sheep—carding—spinning—weaving. A comparison of work by the primitive Indians and the modern factory; highly educational.

CHAPTER IV

ANALYSIS OF THE FILM LIBRARIES BY SUBJECTS OF STUDY

The Geography Films

There are twenty-six reels in geography—of which nine are in the Forty Reel Library, eight more in the Eighty Reel Library, and nine more in the One Hundred Twenty Reel Library.

In the Forty Reel Library four reels apply to the sixth grade, and five to both fifth and seventh. The gradation suggested is the usual one in American cities, but it must be remembered that the distribution of geographic subject matter through the grades is by no means uniform, and the teacher must use her judgment as to the grades. Thus the New York City Course of Study puts United States topics in fifth and seventh grades, while the Columbus, Ohio, Course divides the fifth year with South America, and puts Asia, Africa and Australia in the sixth year. Omaha puts Europe with Africa and Australia in the sixth year and studies the United States with Asia and South America in the seventh.

The reels are about equally divided between the United States and Asia, with two in Cuba.

Many schools do not continue geography into the eighth grade, but where this is done, it is usually an in-



Courtesy General Electric Co.

SCENES FROM "CONQUEST OF THE FOREST"—p. 67

tensification of the preceding work along the lines of physical geography. In this case, those films which emphasize physical features (as the first three) can be used over again. More often the eighth grade geography merges a review of United States geography with civics. The reels under Citizenship will illustrate civics. The Forty Reel Library geography films are about equally divided between the United States and foreign countries.

The provision for substitute reels is very liberal, most of them being free, but some rental. By referring to the Descriptive List of Films in the Libraries (Chapter III), the topic of each substitute may be found under the number given in the outline, also the address from which it may be obtained, and the price, if it is for rent. In general the topic covered is similar to the regular film in the outline, but sometimes, especially in the case of free films, the similarity is only approximate. The regular film written down in the outline should be selected wherever possible.

In the Eighty Reel Library, three reels are added on Europe, one on Africa, two on Asia and one on Australia. South America does not appear. In such short courses all countries could not be included, and it seemed best to supply sufficient material to build up a fairly comprehensive knowledge of a few countries rather than attempt an ineffective stab at all. The Comprehensive Film List of Educational Films in Part II provides, of course, a well of educational films on all countries that can be freely drawn upon by teachers at any time to supplement the regular courses. The Eighty Reel Library includes six films for the fifth

grade, nine for the sixth and eight for the seventh in geography.

The One Hundred Twenty Reel Library makes it ten for the fifth, nine for the sixth and twelve for the seventh. Four of the added reels are on Asiatic countries, four on the United States (physical geography) and one on Europe.

History

The Forty Reel Library begins appropriately with a glimpse of three different types of the original inhabitants of America, and proceeds to a study of colonial life through historic landmarks and shrines. The free reels recommended as substitutes are really very good and can be used if it is necessary to reduce the expense. The series ends with a three reel presentation of one of the famous *Chronicles of America Photoplays* produced by the Yale University Press—*The Eve of the Revolution*—and rounds out the story of our early struggles for liberty. This series is a rare instance of where scholarly educational production achieved popularity in the theaters. The rental is reasonable, considering the cost of production. Here again the temptation was to include the whole series of fifteen historical screen dramas, but consideration for the limited financial appropriation of small city school systems prevented this. However, the whole series thus far issued is given in the *Comprehensive List of Educational Films in Part II*, from which additional selections may be made according to the means of the school system. The three reels here given will take an hour

to run. The importance and educational value of this three reel subject justified a departure from the policy of short reels only for the classroom. There are no free reels that are in any sense substitutes for this number, but for those who cannot afford it, three free scenics are cited. In the patriotic sense of "see America first," a slight justification can be found for their substitution.

The Eighty Reel Library in history starts with another of the Yale Chronicles of History, Dixie. Its three reels give some of the most thrilling episodes of the Civil War, and also a conception of the struggles and stress of the civilian population during war times. Picturing this critical period from another angle is a two reel excerpt from the noteworthy "Lincoln Cycle" known as The Son of Democracy—ten episodes of two reels each in the life of the Great Emancipator. These were produced by Benjamin Chapin, who takes the part of Lincoln. Only these two typical reels of the series are included here, because in the One Hundred Twenty Reel Library, the First National's wonderful photoplay, Abraham Lincoln (ten reels), is recommended. See the full Lincoln Cycle in the Comprehensive List of Educational Films, Part II. Tying up with the development of railroads and steamboats are two purchase reels showing the evolution of transportation by land and water. Two stirring reels on Roosevelt represent the Spanish-American War Period.

The history number in the One Hundred Twenty Reel Library represents a radical departure from the short reel principle followed in this course. The rea-

son is the remarkable nature of the film material. Abraham Lincoln, a ten reel feature play in hundreds of first run theaters, is perhaps the greatest educational production extant for American schools. The First National Pictures has adopted a liberal policy in renting it to schools. The picture is, of course, too long for classroom use, but its exhibition is important enough to warrant the giving up of an afternoon or evening for the whole school and for the parents to see it. If it could come near Lincoln's Birthday or at some other patriotic occasion, the event might have double value.

Citizenship

The main purpose of schooling is good citizenship, and the editor of this course has been especially careful to include stimulating reels that furnish motivation for ethical conduct. In the Forty Reel Library the reels on immigration furnish the background, in story form, for the appreciation of America's basic opportunities, and present, in alluring form, the attitude which the good citizen should have toward his government. The reels are taken from the valuable series on Citizens in the Making, by F. S. Wythe, in use in the Los Angeles Schools and adopted for the school film course now being conducted by the Neighborhood Motion Picture Service, Inc., in New York City.

The simple and direct quality of these reels adapt them to any of the elementary grades. They are accompanied by an elaborate booklet of lesson plans and

teacher helps * that forms a real contribution to the pedagogy of educational motion pictures. These reels are rented, at reasonable prices, and should find a place in every school system. One other reel is scheduled in the Eighty Reel Library. Only the cost prevents scheduling the whole series of thirteen lessons.

If it is absolutely impossible for the school system to rent these reels, the free substitutes recommended may be used. These are *An American in the Making*—the growth of a foreign factory worker in American ideals—and *Our Children* which is issued by the United States Labor Bureau.

In the Eighty Reel Library, Wythe's *American Ideals* is selected, for which a sort of free substitute is *A Letter to Dad*, a boy's club picture sent out by the United States Department of Agriculture. Three other reels, a rental film, *Moulders of Manhood*, and a free two reel film, make six reels dealing with civic ideals.

The One Hundred Twenty Reel Library adds six of the *Romance of the Republic's* series, which can be rented. They deal with the various departments of the Federal Government in a more formal manner than the other reels mentioned.

Attention is called to the Pathé Weekly News listed in the Comprehensive List of Educational Films. Many schools show one of these every week, either in history or civics classes, and they can be rented at very low rates. In the Current Events Course of the Neighborhood Motion Picture Service described on

* See the two film lesson plans on Immigration in Chapter VI.

pages 241 to 245, these Pathé News Weeklies are edited especially for school use, with selected events and stimulating questions.

Nature Study

Next to geography teachers, nature study and biology teachers are the greatest users of educational films. The reason for this is that they are dealing with a type of material having preëminently *life* and *motion*, and that most of the actual animals are either unsuited for classroom use or very difficult to procure and keep. The magic of the film supplies this lack in a remarkably effective way, especially in small cities and towns where zoölogical collections do not exist. The standard zoölogical groups, such as mammals, birds, reptiles, etc., should be subject to constant illustration. These films should be purchased by the school and kept in the film library, as they are needed on many occasions and in many classes.

In the Forty Reel Library the start is made with mammals because of their size, interesting appearance, and habits. Birds are undoubtedly next in our affections, in familiarity, and in popularity with children. The two reels here recommended for purchase present a wide variety of each group. The rental and free reels as substitutes are confined to individual species. The four reels beginning with *Bre'r Rabbit and His Pals* (Rodents) are from the Pathé Screen Studies—a popularization of nature topics for elementary pupils, rather than a detailed “study,” but they contain rare and interesting views of animals in action.

The teachers' leaflets * accompanying all of these are models of modern classroom methods, and their general plan may well be followed in handling films for teaching purposes. The rentals are exceptionally reasonable. The free reels mentioned as substitutes may better be used as supplementary.

The Eighty Reel Library continues the series with four more of the screen studies—one on molluscs, one on the interesting subject of protective form and coloring in the struggle for survival, one purchase film on reptiles, and one in general science on weather measurements and predictions.

The One Hundred Twenty Reel Library gives opportunity for introducing four of the greatest educational films series thus far produced. Each of them has already become classic in the field. The first, *How Life Begins*, was produced by the pioneer biology film technician, George E. Stone, whose inventions and productions made clear to educators that motion pictures of microscopic animal life and tissues constituted classroom illustrative material of the highest teaching value. Other scientific pictures by Stone are listed in the *Comprehensive List of Educational Films, Part II*.

The *Four Seasons*, produced by Raymond L. Ditmars, curator of the New York Zoölogical Society, has had extensive theatrical, as well as educational, runs. While films produced from this double point of view usually suffer from the classroom point of view, the *Four Seasons* must be regarded as an exception. It is a wonderful exhibition of the succession of animal and plant life throughout the year, and is conceived

* See one of these complete in Chapter VI.

and executed with unusual regard to beauty as well as science. Mr. Ditmars has produced a valuable series of zoölogical films (thirty-two subjects) all classified in textbook fashion. They are suited for high school and college classes and are not for rent. The whole series is listed in Part II, under Purchase Films, and one film from his Living Natural History Series (Planaria) is inserted in the One Hundred Twenty Reel Library as a purchase film.

Tolhurst's Secrets of Life series rival those mentioned above in scientific interest. It is noteworthy that, like Ditmars', Tolhurst's unusual studies attracted the attention of the theatrical producers and his science subjects are still popular as auxiliaries to feature programs. The full series is given in Part II under Rental Films.

Language and Literature

The best way in which the film can serve language classes is to furnish vital and thought provoking pictures for composition and conversation. Enlarging the circle of thought enlarges the vocabulary. A new thought, especially one involving imagery, forces new words. Thus any good educational film of travel, industry, current events, or the like can be used to excellent advantage for vocabulary building in language classes, and the teacher should draw freely from the Comprehensive List of Educational Films for this purpose.

The lessons based on the United States Government





Courtesy General Electric Co.

SCENES FROM "A WOOLEN YARN"—p. 67

films used by Miss Aiton in teaching English to foreigners are very suggestive, and one of them is given in Chapter V, Six Sample Film Lessons.

Mr. Thompson, who is in charge of the Visual Instruction work at the School for the Deaf in Trenton, New Jersey, has done some stimulating work in getting language value out of film presentations.

It is interesting that schools for special classes are our most frequent source of new methods, that later, somewhat modified, prove good for all education. So Hampton and Tuskegee have taught the whole world the value of industrial education, and Montessori's work with backward children has made a great contribution to our kindergarten system. In like manner, schools for the deaf should be the world's great laboratories for methods of instruction through the eye gate.

In addition to films that are made the basis of composition, there are a few dealing with the lives and works of noted authors. Among the best of these are the Charles Urban series on Great American Authors. Five of these are put in the Forty Reel Library, and five more in the Eighty Reel Library as rental numbers.

Relation of Films to Great Literature Still in Doubt.—A great number of films have been produced purporting to be representations of great literature, American, English and European. Many of them are such violent departures from the original that their exhibition to the school child would distort and well nigh destroy his own truer conceptions gained from the work itself. Others, while faithful in general to

the story, take liberties that make subtle changes, more mischievous because not so easily detected.*

However, some film stories of great pieces of literature do exist concerning which literary criticism has been generally favorable. These are listed without comment or recommendation in the Comprehensive List of Educational Films in Part II, but are not included in the Libraries. Their length alone makes them unsuited to classroom presentation, but they are available for school and community entertainments.

The relation of book films to book reading is still a matter of investigation and debate. Some librarians have kept track of the increase in the calls for certain books when the film stories were being run. Whether the drawings were mostly after or before viewing the photoplays is not recorded—an unfortunate omission. It is conceivable that many persons, having seen the photo play the “Hunchback of Notre Dame,” might neglect reading the book under the false impression that they have already had the story and spirit of the original. In other words, groups of people may view the film as a *substitute* or short cut for the book. The appreciation of literature would not gain by such procedure. Bernard Shaw, as reported by Archibald

* “Discussing ‘The Motion Picture and English Literature,’ a professor of English at Brown University writes: ‘If in general it is dangerous to supplant books by motion pictures, it is trebly so in literature. A motion picture can give only the facts of the case in action plus whatever elemental emotion these facts generate. If the motion picture accentuated the habit of thinking in bits it would not be a help but a menace. The best part of a novel cannot be transferred to the screen. A coarsened, syncopated representation of the plot (as in *Treasure Island*) can be given, but that is all.’”—*Motion Pictures in Education* by Ellis and Thornborough.

Henderson, puts in an incisive remark, drawing attention to a similar situation between the drama and the movie: "People see a 'Macbeth' film. They imagine they have seen 'Macbeth,' and when somebody comes to act the play, he finds the house empty."

Movies, the Wrong Instrument.—Attempts to teach grammar with motion pictures have not been encouraging. One such film observed recently, represented the parts of speech by children, who had various signs pinned on to them, and the relation of these parts of speech were shown by friendly greetings or fist fights. The effect was confusing and the picture absurd. These poor children and their instructor got in the way of the simple relationship which they were supposed to illustrate and thousands of dollars were wasted in a sad mixture of comedy and tragedy. A few slides, or a blackboard, or simple words and sentences in a book with a capable teacher to give the class practice in their use are still much more effective. One is reminded by such misconceptions of "making things easy for children," of Montessori's notable words which expressed her disapproval of the overdose of "stories" and juvenile "busy work" which passes for expert primary teaching in some schools. Three words she gave her disciples: simplicity, brevity, truth. Their wise application in modern school work would brush aside great piles of pedagogical junk that clutter up school closets and recitation periods.

The cause of visual education is injured every time motion pictures are applied to phases of education too abstract for picturing or for which simpler and cheaper forms of illustration are more effective.

Vocational

Appreciating the fact that many of the school systems using these film courses of study are in small towns with many of the children from rural communities, and because, also, agriculture is as fundamental, and should be as familiar, to the urbanite as to the country boy, an unusual number of free films dealing with agricultural products and pursuits are included in the vocational unit.

The other occupations illustrated are basic and are those with which most modern citizens are concerned, *viz.*, automobile construction, radio, manufacture of lumber, woolen cloth, and flour. Other occupations are illustrated in many of the scenic and other films (see the descriptive notes under each film), such as honey making, orange culture, sugar, logging, rice and copra growing, railroading, cheese making, fishing, X-rays, and the manufacture of iron and steel.

Educational-Industrial Films (Advertising Films).—Hundred of excellent films illustrating scores of industrial processes are catalogued in the Comprehensive List of Educational Films, Part II. Here is a fortunate situation indeed. Vocational Education is in great need of motion picture illustrations for the multiform industrial processes that cannot be reproduced in the schoolroom or to which the children cannot be conveniently taken, and these industries themselves have produced for free circulation the very films needed.

Of course, some of these are spoiled by too much or

too obvious advertising, but those parts should be ignored in the subsequent study period by the teacher, and the more instructional views emphasized. Many of these "industrials" rush through the action of complicated machinery too fast for immature minds to grasp. Here is the place for using the stop-on-film shutter. The teacher should stop the head mechanism of the machine, and permit pupils to go up close to the still picture, pointing out details as desired. Further explanations by the teacher are essential, and to do this intelligently, opportunity should be given her to view the film before the class presentation.

Many companies producing industrial films have discovered how to present the manufacture of their product with the minimum of advertising. The forms most acceptable to schools are where the label occurs incidentally on a package, or better still, where the only reference to the manufacturer is a brief leader or trailer like the following:

This picture is shown through the courtesy
of The Starlight Manufacturing Company,
Cambridge, O.

Physiology, Health, and Welfare

The One Hundred Twenty Reel Library in this subject covers in brief the main topics in physiology and hygiene—*viz.*, the eye, the ear, circulation of the blood, diet, vaccination, prevention of tuberculosis, and care of the teeth. The free films suggested include also digestion, and the human skeleton and vital organs

viewed by means of X-rays. Several highly technical series, designed for medical students, will be found in the Comprehensive List of Educational Films, Part II.

Athletics

Modern athletics, with its abundance of action and intensive training systems, lends itself excellently to motion picture instruction. Two of the athletic films in the Forty Reel Library are Grantland Rice Sport-lights (Pathé), which have proved as popular in the theater as in the schools. The Visual Text Book Publishers of Los Angeles have produced a notable athletic series directed by great athletes. In the Eighty Reel Library we have placed Corrective Gymnastics as representative of the group, and because it is a subject of growing importance to the physical development of the whole student body, rather than to the few on the teams. The One Hundred Twenty Reel Library adds Coach Rockne's great reels on Fundamentals of Football, and a short reel of the golfing form of the champion, Bobby Jones. The free substitute reels in this series relate to general outdoor sports.

Mathematics, Physics, and Chemistry

Movies, the Wrong Instrument Again.—Educators will notice the absence of films on these subjects. They are omitted, not because such films do not exist, but because, in the opinion of the author, motion pictures do not furnish economical illustrations for these subjects. Most mathematical rules and operations are

reduced to verbal formulæ, that function best in the memory when freed from concrete limitations. Where reasoning is called for, the terms of the equations used are these verbal expressions that work best when reduced to abstractions. Geometry, the apparent exception to this statement, is so easily and cheaply illustrated with the blackboard and pencil, that it is an almost criminal waste of school funds to use them in the production or purchase of such films. Such expenditures can be justified in the experimental laboratory where curious things are produced, but not in public school classrooms.

Any psychologist knows that abstract thinking is more frequently hindered by attempts at illustration than otherwise. There is a film which attempts to illustrate the Einstein Theory, and eminent educators are quoted in praise of it. If it really makes the theory clear to the lay mind, it will represent a victory over the printed word greater than any responsible movie advocate has yet claimed. The latest attempt of this kind is a film in explanation of the Freudian theory of psychoanalysis. But metaphysics and philosophy ordinarily do not present favorable fields for educational motion pictures.

Many topics in physics can be clearly illustrated by motion pictures, as many electrical films and films on other mechanical processes show. However, except in the case of large and expensive installations, the laws of physics can be better illustrated with the simple and well-known pieces of apparatus in the hands of the instructor. Films exist to show the attractions of magnets for iron filings, but an inexpensive magnet and

bits of waste iron are more practical classroom illustrations. The film would cost \$100.00; the magnet and filings, a few cents.

In general, we must not forget that the best possible illustration in the classroom is the object itself; and when this object is inexpensive and easily handled, it is absurd to spend money on a film.

Some very elaborate and technical films in physics have been produced in college and technical laboratories. These are concerned with costly installations not possible to many school systems. While they are very valuable for technical students, they lie beyond the scope of these outlines. They can be found listed in Part II.

So also in chemistry, to show the effect of oxygen in combustion by means of a film is to do at great cost what could be done better at little or no expense by the teacher himself with a match, a few combustibles and a blackboard in the classroom. Highly technical processes in chemistry, are a different matter, and some films of this nature are listed in Part II. They are not suitable for elementary school classrooms.

CHAPTER V

SIX SAMPLE FILM LESSONS

(Teachers' Leaflets)

1. Bre'r Rabbit and His Pals (Rodents)—Pathé Screen Study.
2. California's Wonders—DeVry Library.
3. Milk as Food—Ford Educational Library.
4. Uncle Sam, World Champion Farmer—Report by Miss Maude E. Aiton and Mrs. Helen C. Kiernan.
5. Twentieth Century Pilgrims (Immigration)—From Wythe's Citizens in the Making—Neighborhood Motion Picture Service, Inc.
6. Steps Toward American Ideals—Neighborhood Motion Picture Service, Inc.

The advent of the motion picture into the classroom is so recent that any dogmatism at this time concerning methods of using it for teaching purposes would be premature. The best practice at the present time is for each teacher to work with it until she finds the ways which produce the best results.

Experimental studies, as far as they have been recorded, are valuable for data for further experimentation, but of little use for conclusions. The day of conclusions and generalizations in motion picture pedagogy has not yet arrived, though some published studies have hard work to keep from forcing conclusions. All experiments to date are too brief, too

limited in environment and personnel to formulate laws of procedure. A mere change in the teacher, in the group of children, in the character of the film used, in the type of projector installed, in classroom instead of assembly room showings, might change any of the results too radically for safe deduction.

The refinements of some of the tests used and the mathematical computations made with graphs and coefficients of correlation formulæ, etc., may give an appearance of conclusiveness to the experiments, that the conditions under which the experiments proceeded do not justify. Many questions are far from settled:

Should the film be used before or after a topic?

Should teachers talk while the film is running?

Should pupils talk?

Should slides be used with the films?

Should dark rooms be used or light?

Should this or that type of projector be used?

Should we stop on certain pictures and elaborate?

Should we stop on titles?

Should still subjects ever be shown on motion picture film?

Should animated diagrams be used?

Should industrial (advertising) pictures be allowed in the schools?

Are dramatic films permissible in the schoolroom?

Should teachers use one reel pictures or five? half reels or quarter?

Should the picture be shown once, twice or three times?

A number of similar questions are all subject to many more trials than have been given. When thousands instead of scores of teachers have used films under varying conditions and for a series of years, we may begin to draw conclusions. For the present, the pressing need is to use this new and wonderful tool over and over again, to observe effects, to record results, to confer on procedure, and to avoid snap judgments.

Experienced teachers know, of course, that the film is only one tool in the teacher's kit; that it will be helpful if used skilfully, harmful if used thoughtlessly. Its tremendous influence in the theaters shows that it has great possibilities for work in the schools when put into the proper harness. How to find that harness, how to find the peculiar values that it can add to other valuable teaching aids, is a matter just now necessitating a much greater amount of practice, practice, practice, and eternal vigilance, to discover weaknesses and strength.

One of the best things to do in the midst of the flux of methods, is to study some methods that have shown a measure of success, and print them in sufficient detail for others to study and try out. This is the author's reason for inserting here several interesting examples of "method sheets," pedagogical leaflets, teaching helps, etc., that have been worked out with certain films. The six sample film lessons which are given on the following pages represent diversity both in subject matter and in method.

Film Lesson I

TEACHERS' AID ON BRER RABBIT AND HIS PALS *

(Rodents)

APPLICATION

Biology—Zoölogy—Nature Study

THE TITLES

1. BRER RABBIT AND HIS PALS
2. FROM THE SERIES OF
FASCINATING NATURE STUDIES
ON
3. WONDERS OF LIFE
IN THE
PLANT AND ANIMAL WORLD
4. This series pictures typical living specimens of Every Branch in Zoölogy, from the lowest and simplest forms of one-celled animal life up to the highest, of the most intelligent mammals.
5. "Rodents" form by far the largest Order of Mammals, there being over 1,000 species. They are small and for the most part ground animals, though some live in trees like Squirrels and others in or around the water like Beavers.
6. Other common Rodents are Rabbits, Gophers, Chipmunks, Prairie Dogs, Woodchucks, Guinea Pigs and Mice. We will have a little study of these and some others.
7. In the head of our gentle Brer's Rabbit are found the kind of jaws and teeth that distin-

* From Pathé Screen Studies.

guish this whole Order of Animals. Notice the sharp projecting front teeth, called "Incisors."

8. Now watch them work. This is why this whole class of animals is called "GNAW-ERS."
9. No other animal is without the teeth between incisors and the molars, as the Rodents are. Now let us see the way the back teeth grind and grate.
10. This Bunny, we call the "Snowshoe Hare."
11. See why?
12. As any rabbit knows, a very fine protection against enemies is a good thick briar bush.
13. Besides the hunter, he has as other enemies, the blood-thirsty ermine and mink.
14. He can show speed in getting out of their way.
15. The Cottontail is another member of the family. Can you find Peter, Flopsy, Mopsy and little Molly?
16. Another division of Rodents is called the "Squirrel Family." Here is a good example of the Tree Squirrel.
17. His nest.
18. This man is clever in the use of the squirrel trap. But why not leave the little animal to the freedom of the woods?
19. In captivity. Longing for freedom.
20. The pests that cause the world more trouble than any other rodents are Mice and Rats, the sly little rascals!
21. It's bad enough to try to catch mice when

they just run, but when they can go in leaps and bounds like this . . .

22. You are right—this is no ordinary specimen of a house mouse—but a “jumping mouse” or Jerboa, that lives in places like this.
23. The Jerboa uses his front paws as pick-axes, and his hind feet as shovels to get rid of the loosened sand.
24. Do you see why this class of animals is called Gnaw-ers? The struggle to get out of his prison.
25. The kind of Rodents that live under the ground, and that is most of them, are great engineers. This Prairie Dog will show us how he provides a suitable home.
26. Here is a diagram of a typical burrow.
27. The alarm—and how they can yelp!
28. Even the tiniest toddler obeys.
29. As a whole, Rodents do far more harm than good. They destroy millions of dollars worth of crops of vegetables, grains and even fruits. This little Marmot is fond of grapes.
30. One of the most fascinating stories of the wonders of nature is that of how some animals sleep all through the winter. Mr. Woodchuck, will you please show us how it is done?
31. He’s fat—and he’s Oh, so sleepy—Good-night!
32. Months have elapsed. It’s past mid-winter. Let’s have a look.
33. In cases of the most complete Hibernation (winter sleep), breathing of the animal nearly

ceases, so that he could be kept alive under water, while asleep, for twenty minutes. But the heart still beats. Think of it! That keeps the life current going.

34. But when the morning of the real Spring arrives (early April) Mother Nature awakes her child and out he comes.

35. Many little animals of this class come out of their homes only in the evening. Why? Here is a Moonlight Serenade.

ADDITIONAL INFORMATION

Among the most common Rodents we have Rabbits, Hares, Porcupines, Guinea Pigs, Rats and Mice, Beavers and the whole Squirrel Family, which includes among the Tree Squirrels, the Fox Squirrel, Red Squirrel and Gray or Black Squirrel. Then there are in this family the Chipmunks, the Ground Squirrels, perhaps more commonly called Gophers, the Prairie Dogs and Woodchucks, also called Ground Hogs. The Little Marmot, shown in the film, corresponds in Europe to our Woodchuck.

The most universal and common rabbit is the Cottontail, found all over the U. S. There are several species of Jack-rabbits, limited mostly to the plains and mountains west of the Mississippi. Rabbits multiply very rapidly. The fur of Australian rabbits is used in making boas, muffs, hats and trimmings, but the fur of the American rabbits is not used much except by the Indians. The damage of rabbits is not very great to large cultivated areas but they do occasionally injure wheat and alfalfa fields. Their damage is more serious to vegetable gardens. Rabbits are very good eating, especially the younger ones. Rabbit drives take place in some parts of the country at which as many as ten thousand to twenty thousand rabbits are killed at a single drive.

Mice and Rats, especially Rats, are by far the worst of all mammalian pests. Not only does their annual damage, the world over, to food and stored products amount to hundreds of millions of dollars, but we have learned that they carry the disease germs of the dreaded

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Bubonic Plague. Modern methods of fighting Rats are to cut off their food supply and to destroy, as far as possible, their breeding places.

We find the Squirrel Family very interesting from many different standpoints. Although the Squirrel proper which we show in the picture is a Tree Squirrel, there are also the Chipmunks, and Ground Squirrels. A brief touch is given in this picture showing how remarkable these little animals are as "engineers" using their paws and nose and tail as tools to build their mounds and burrows. No better example is given of colonization than among the Prairie Dogs. They live in colonies numbering all the way from 40 to 1,000 individuals. The Woodchuck, also known as the Ground Hog, does not live in colonies. The story about his coming out of his hole in February to find out if his shadow can be seen, which predicts the amount of time that Winter is to last, is clearly a myth. The example that we find in this picture shows how soundly he hibernates all winter long. One interesting characteristic of the Squirrel Family is the well-known one of his ability to lay up provisions. On the whole, Tree Squirrels are not very great pests, but the ground variety does considerable damage. However, they compensate in a measure for this by eating many destructive insects such as grasshoppers, cut-worms, beetles, etc., often, too, killing Mice and other small noxious animals.

SUGGESTED QUESTIONS

1. To what general class of animals do Rodents belong? About how many species are there in this Order? How does this compare in size with other Orders?
2. Name all the animals that you remember having seen in the picture. What Rodents do you know of that you did not see pictured?
3. What is the one predominating characteristic of these Animals that classifies them as Rodents?
4. Of what use are these animals? Do they do more harm than good, or vice-versa? Which

ones would you choose for pets? Which ones are the worst pests and why?

5. Why does the "Snowshoe Hare" bear that name? Do all Squirrels live in trees? Would you trap Squirrels and keep them in captivity? What other animals belong to the Squirrel Family besides those commonly known as Squirrels?
6. What Rodents live under the ground and why do we call them expert engineers? Describe the way they work and a typical burrow.
7. What is meant by hibernation? Describe it, definitely locating seasons of the year in which its chief events take place. Name some other animals besides Woodchucks that hibernate.
8. Is the food of Rodents chiefly animal or vegetable?

REFERENCES

Economic Zoölogy—By Kellogg and Doane—Published by Henry Holt & Co.

Practical Zoölogy—By Hegner—Published by Macmillan.

Zoölogy—Descriptive & Practical—By Colton—Published by Heath & Co.

A Text Book in General Zoölogy—By Linville & Kelley—Published by Ginn & Co.

Film Lesson II

TEACHER'S LEAFLET FOR "CALIFORNIA'S WONDERS"

(DeVry Library of Film Negatives)

(The directions, questions and references given are

more than a teacher will use in a lesson. She is expected to select only those most available or pertinent to the general tenor of her work, and, of course, to add others if she thinks that they are needed for her purposes.)

- I. PREVIEW OF FILM BY TEACHER—with notes of important points (stop-on-film).
- II. ORAL INTRODUCTION AND MAP STUDY FOR THE CLASS.

Show a slide map on screen, a wall map, or a blackboard map of the United States.

Estimate how far it is from Chicago to Washington, D. C. (787 miles).

Now look at the State of California. It is exactly that far from the north to the south line of California—the longest state in the Union. It is so big it has every variety of land and water features—mountains, lakes, glaciers, deserts and enormous forests.

Find the Sierra Nevada Mountains. Find the Coast Range.

The great valley in between is very rich. Find Mt. Lassen on the west side of Sierra Nevada. It is the only volcano in the U. S. We will see it in pictures soon.

Find the Yosemite National Park—it's twice as large as Cook County.

Find the San Bernardino Mountains. One of the peaks is just outside of Riverside. It is called Mt. Roubidoux. An interesting thing takes place every Easter on this mountain.

Remember where it is when you see the picture.

III. FIRST SHOWING OF FILM TO CLASS. (Scenes, with teacher's remarks and questions.)

1st. Scene—Mt. Roubidoux. As this scene is run the teacher asks, "Near what city is Mt. Roubidoux? (Pasadena.)"

2nd. Scene—A fallen giant (stop-on-film). "How tall is the girl?" "Is the diameter of the tree twice as long?" This tree is in Mariposa Grove in Yosemite Park. Some of California's big trees are 40 feet through and 300 feet high. That's higher than a 20 story building.

3rd. Scene—Mt. Lassen (stop-on-film). Smoke is frequently seen issuing from the crater of this volcano. Where did we find Mt. Lassen on the map? (In Shasta County; almost due south of Mt. Shasta.)

4th. Scene—Yosemite Creek takes a leap of 2,670 feet in three jumps (stop-on-film). The Merced River (mercy) of which the Yosemite Creek is a branch, carved out the Yosemite valley in prehistoric times. It is a mile deep in places.

5th Scene—The Three Brothers. Here are two of the famous formations, the Three Brothers.

6th Scene—El Capitan. El Capitan means "the captain" in Spanish.

7th Scene—Winter Sports in Summer.

8th Scene—Mirror Lake.

9th Scene—Lake Tahoe, celebrated as the highest lake in the United States.

10th Scene—An Ostrich Farm at Truckee.

IV. FOLLOW-UP WORK

(Self-activity of pupils in research, construction, or recitation. Project work.)

1st. Look in the encyclopedias, geographies, and atlases, guide books and books of travel for other famous features of Yosemite Valley. Each one bring a picture or tell a fact about Yosemite Valley.

2nd. Which is larger, Yosemite Valley or Cook County? (Cook County, Illinois, is 933 square miles. Yosemite Valley is roughly 1 mile by 8 miles long.) How estimate? (Use the scale of miles on map.)

3rd. How old are the big trees of California? (One over 3,000 years.) How can scientists tell the age of trees? (By the annual rings formed by the new growth in the cortical layer.)

4th. The cross on Mt. Roubidoux is in honor of the first missionary priest to visit the Coast of California. What was his name? (Padre Junipero Serra.)

5th. Name animals peculiar to Australia. (Kangaroo, duckbill, kiwi, cassowary.)

Helps for Research.

Article on California—p. 576, Volume 2, Compton's *Pictured Encyclopedia*.

Carpenter's *United States*.

Stoddard's *Lecture on Yosemite*.

Railroad booklets:

Southern California, Union Pacific; *On Your Way*, Rock Island; *Along the Union Pacific System*; *Wayside Notes Along the Sunset Route*, Southern Pacific.

V. SECOND SHOWING OF FILM TO CLASS

During the follow-up work on the second day, or at its close, the film should be run again to clarify concepts, or furnish stimuli for student recitation or composition.

VI. FURTHER ILLUSTRATIVE MATERIAL:

FREE FILMS (See descriptive notes in Part II).

Journey Through the Valley of Heart's Delight—2 reels
—Castle.

San Francisco—Castle.

Sentinels of the Sunset—U. S. Ag.

Sixty Minutes from Broadway (Los Angeles)—Castle.

Story of the Orange—Leggett.

The Golden Gift (Orange)—Castle.

Romance of the Lemon—California Fruit Growers Exchange, San Francisco.

Story of our National Parks—White Motor Company,
6611 Euclid Ave., Cleveland, O.

Touring California's Ports—Castle.

Roads to Wonderland—U. S. Ag.

Highroads and Skyroads—U. S. Ag.

Winged Guardians of the Forest—U. S. Ag.

SLIDE SETS.

Yosemite—39 slides—(DeVry Set) Standard Slide Corporation, 209 W. 48th St., New York City.

Nos. 36, 48, 59 and 81—(De Vry Primary Set) Standard Slide Corporation, 209 W. 48th St., New York City.

600 set—Keystone View Co., Meadville, Calif.

Famous Missions of California—60 slides—Victor Animatograph Co., Davenport, Iowa.

California—53 slides—Victor Animatograph Co., Davenport, Iowa.

San Francisco—41 slides—Victor Animatograph Co., Davenport, Iowa.

Panama Pacific Exposition—70 slides—Victor Animatograph Co., Davenport, Iowa.

University of California—15 slides—Victor Animatograph Co., Davenport, Iowa.

California—William Brown and Earle, Inc., Philadelphia.

Yosemite—William Brown and Earle, Inc., Philadelphia.

San Gabriel Valley and Pasadena—William Brown and Earle, Inc., Philadelphia.

Los Angeles—William Brown and Earle, Inc., Philadelphia.

San Diego—William Brown and Earle, Inc., Philadelphia.

Big Trees—William Brown and Earle, Inc., Philadelphia.

Palo Alto—William Brown and Earle, Inc., Philadelphia.

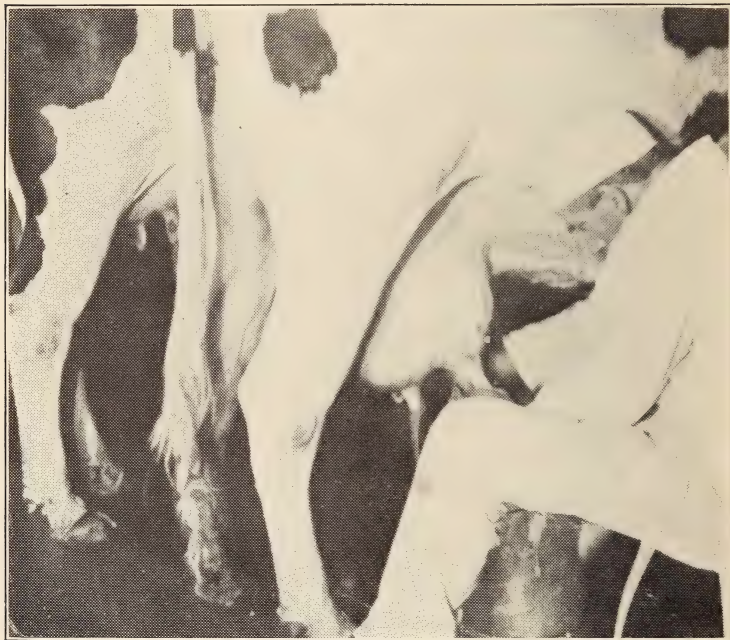
Missions—William Brown and Earle, Inc., Philadelphia.

Sierra Nevada Mountains—William Brown and Earle, Inc., Philadelphia.

PRESS PICTURES.

Pictorial Geography Series—National Geographic Society, Washington, D. C.

Should further work on California be undertaken, topics should be divided up for assignment. Coöperative research and report should be made (seminar method). The study would then take on the proportions of a *project*. To add concreteness to the study, visits may be made to any local features which would serve for comparison with California. For Chicago pupils, the Lincoln Park Zoo for ostriches, seals, etc., Field Museum for orange culture and other characteristic California products.



Courtesy of Ford Motor Co.

SCENE FROM "MILK AS FOOD"—p. 99

SYNOPSIS OF SUB-TITLES

Picturesque Religious Ceremony held annually on
Mount Rubidoux, California.

A Fallen Giant, California.

Mount Lassen—only active volcano in the United
States keeping quiet to have its picture taken.

Beautiful Yosemite Falls, California.

The Three Brothers, Yosemite.

Majestic El Capitan, Yosemite.

Winter Sports in Summer—snowballs, skiing and to-
bogganing.

Mirror Lake—with Reflections.

Lake Tahoe.

An Ostrich Farm, Truckee, Calif.

The Ostrich, native of Australia, is one of the strange
survivals of giant animal species, found only in that
island.

Film Lesson III

AGRICULTURE *

(Milk as Food)

EDUCATIONAL PURPOSE

Milk is nearly an ideal food as it requires less than
two hours for complete digestion. A chemical analy-
sis shows milk to be a complete food, having all the ele-
ments that are required to build up and keep the body

* Copyrighted, 1922, by the Ford Motor Company.

in repair. Besides being a nearly perfect food, it is a cheap food.

The Milk as Food film, is designed to give an intelligent conception of the methods of handling and safeguarding milk from the cow to the consumer. Milk as Food presents clear information upon the milk problem. A model dairy is visited and each step in caring for the milk is examined. Diagrams show the constituents of milk and the food value of each. Definite suggestions are made for the proper care of milk in the home. The value of milk for rapidly building up undernourished children is emphasized.

Milk as Food visualizes the necessary facts for lessons upon the geography of a common food. The information presented is a definite aid in domestic science, dietetics and elementary agriculture.

TITLES OF SCENES.

(The following titles are exactly as they appear upon the film.)

I.

Cow's milk is the cheapest and most nourishing of foods. It forms one-fifth of our diet. Seventy-two per cent of the babies live on cow's milk.

II.

The best bred cow gives the finest milk. Green pastures with running brooks are chosen for the dairy farm.

III.

The Jersey cow gives the richest milk. The Holstein's milk is almost like the mother's milk.

IV.

The milk from this peaceful Holstein herd goes to a great city. The milk supply of a city is an important health problem.

V.

At sunset the cows come to the dairy barn.

VI.

Sweet and clean, without flies or dust is the dairy.

VII.

Each cow finds her place which is marked with her name and number.

VIII.

Hay and grain are fed when the cows are kept indoors.

IX.

Each cow is sprayed and the floor is washed clean.

X.

Before milking each cow is wiped with a clean cloth, which keeps dust and dirt out of the milk. The milkers wash their hands and dress in clean white suits.

XI.

The warm fresh milk is drawn from the cow into a pail through a cloth cover.

XII.

The milk of each cow is weighed. A careful record is kept. Low yielders are taken out of the herd. Some cows give 28 quarts daily.

XIII.

The milk is strained and cooled.

XIV.

It is tested for butter-fat.

XV.

The food value of milk. (Diagram)

XVI.

Bacteria and harmful germs grow rapidly in warm milk. It must be kept at 50 degrees or lower. Large dairies have special cooling rooms.

XVII.

Pasteurization means to heat milk to 155 degrees for for thirty minutes. This prevents the growth of harmful germs. Our largest cities insist upon this process. It protects the babies.

XVIII.

Steam and hot water are used to keep the bottles clean.

XIX.

After pasteurizing and cooling, the milk goes through pipes to the bottling machine.

XX.

The bottles are capped and the milk must be at your door within 36 hours. Stale milk is dangerous for babies and not fit for adults.

XXI.

The cow gives the rich milk and mother keeps it clean and cold. Then we thrive—

XXII.

Milk is the food highest in growth-producing material, mineral salts and vitamins. Babies live on it. Children from two to twelve years require for healthy growth a glass each meal.

XXIII.

Milk is liquid meat, without waste and easily digested.

XXIV.

In cities, less than half a pint of milk is consumed daily by each person. More milk used in your family means better health and a cheaper diet.

XXV.

Milk is an ideal food for it supplies all the needs of the body. (Diagram)

MILK AS FOOD.

I. COW'S MILK.

Milk is the cheapest and most nourishing of foods. Milk and milk products form about one-fifth of our diet. It is the one food that is a necessity, for seventy-two per cent of the babies are raised on cow's milk.

Great care is devoted to the breeding of milk cows. The Holstein cows shown in the film are the best producers and their milk resembles closely the mother's milk. A thoroughbred Holstein will give daily twenty-eight quarts of milk. The Holstein cows are kept in the dairies which sell raw milk. The Jersey and Guernsey cows give a richer milk but not as much as the Holstein. The dairy herd, whose milk is used for butter making, consists of the Jersey or Guernsey cows.

The dairy cow requires grassy pastures with cool streams and shady trees. It is very important in the production of milk, that the cows be quiet, contented and comfortable. The Holstein herd in the film is shown under ideal conditions for pasturage.

II. THE MODERN DAIRY.

Formerly, the milk on the farm was cooled in the

spring house and it was given no more attention. In handling large quantities of milk, the spring house has been replaced by the modern dairy. The building, shown in the film, houses more than one hundred cows. It has clean cement floors, it is well ventilated and lighted. The dairy is carefully screened and contains no flies. Dust and dirt are prevented by sprinkling the floors.

Each cow has its stall marked with her name and number as shown. All stalls are scrupulously clean. Near the cow is a stream of pure spring water, and the food manger is a cement basin.

III. THE CARE OF MILK.

In grandfather's day, the cows were driven home from the pasture to the barn and the milking was done in the evening. Flies were troublesome. The cow's tail would flirt dirt into the pail, and sometimes the cow would be unruly and the milk spilled. In the modern dairy the milking is done very quietly and in a sanitary manner. Each milker is required to wash his hands before and after each milking. They wear clean white suits. Each cow is wiped clean of the dust and dirt. The udders are carefully cleaned with a solution of boric acid. The pail has a cloth cover to strain the milk. The largest dairies use a milking machine, which is a great labor saver. It is operated by electricity and is a great aid to the dairyman who has a large herd.

The milk of each cow is carefully weighed as shown in the film. A careful record is kept of the yield of each cow, and those having a low yield are taken out of

the herd. Some of the cows in this herd give twenty-eight quarts of milk daily. It is necessary to know the yield of each cow, otherwise the dairy will not pay. This is the reason for the careful selection of the cows in the herd.

After the milk is obtained you will see it taken to a part of the dairy where it is strained and cooled. Samples of the milk are tested daily. The milk varies in quantity as well as quality. All raw milk shipped into the cities must be of a certain standard in quality. The city department of health employs milk inspectors who sample and test all milk sold. Milk that is stale or contains germs is destroyed.

IV. THE CONTENTS OF MILK.

Milk is an emulsion of fat in a water solution of casein, milk, sugar, albumin and mineral matter. Milk from different cows or the same animal varies in its composition from time to time.

The average composition of milk is as follows:

Water	87.0 per cent
Fat or butter-fat	4.3 per cent
Proteid or casein	3.0 per cent
Milk sugar	5.0 per cent
Albumin and mineral each less than7 per cent

The film diagram shows the constituents of milk. It is well known that the fat is used in making butter and the casein is made into cheese. Where the milk is sold raw it contains all its natural parts. Sometimes milk is evaporated and sold as condensed milk. Milk is also made into milk powder which is a convenient form.

V. PASTEURIZATION.

Milk even when handled under the most favorable conditions contains bacteria and frequently harmful germs which increase rapidly if the milk is warm. Milk must be kept at fifty degrees of temperature or lower. All large dairies have special cooling rooms similar to the one pictured.

When milk is shipped a long distance it must be Pasteurized. This is done by heating it to a temperature of 155 to 160 degrees for 30 minutes. This treatment destroys the germs of diphtheria, scarlet fever and other diseases. Pasteurizing protects the user but does not change the nutritive properties of the milk. Pasteurization is the discovery of the famous Frenchman, Pasteur. Nearly all the large cities insist on this treatment of milk for it is a protection to babies. The improper care of the milk by any of the many people who handle it means suffering and frequently death to the babies.

VI. BOTTLING THE MILK.

A few years ago milk was delivered by the milkman whose wagon carried the large tin milk cans. The amount required by the housewife was dipped out. The modern dairy bottles all the milk that is sent to the city. We can see how carefully the bottles are cleaned with steam and hot water. Automatic machinery fills the bottles with the cool milk and they are sealed with paper caps. Every precaution is used to protect the milk from contamination by dust, dirt or other impurities. The bottles are packed in boxes and

loaded upon special milk trains which go to the city.

VII. DELIVERING THE MILK.

The milk is delivered in a large city by means of motor trucks and wagons. The delivery starts early in the morning and the milk of the previous evening is on your doorstep for breakfast. It is very important that it reaches your table before it is 36 hours old. Stale milk is dangerous and not fit for babies or adults to use. New York City consumes nearly 2,000,000 quarts of milk daily. This supply is obtained from 80,000 cows, some of which are more than 300 miles from the city.

VIII. CARE OF THE MILK IN THE HOME.

The milk in the home must be given proper care, or it will quickly spoil. It must be kept cool and not be exposed to dust or dirt and placed in clean covered dishes. It is very necessary that the home care of the milk be entirely sanitary, or the scientific work of the dairy will be of little benefit. Care, Cold and Cleanliness are the three C's necessary to keep milk pure.

IX. THE FOOD VALUE OF MILK AS COMPARED WITH OTHER FOODS.

Sometimes we think milk is not a food because it is liquid. It is a fact that a quart of milk has the food value of eight and one-half eggs or eleven ounces of sirloin steak. The film diagram should be given very careful attention as it shows the value of milk as compared with other foods.

X. MILK IN THE DIET OF GROWING CHILDREN.

Cow's milk for bottle-fed babies requires the greatest care and attention in its preparation. The mother should realize that cow's milk must be modified for the baby and unless care is exercised the baby's health is endangered.

Milk is a necessity to children until twelve years of age to assure a rapid and steady growth. Milk is a food easily digested, rich in growth-producing materials, protein or muscle builder, mineral salts and vitamins. The standard diet of meat, potatoes and bread is very low in lime and vitamins; the milk corrects this defect. A pint of milk contains as much lime as twelve pounds of meat or four pounds of bread. The lime is necessary in the childhood stage of bone formation.

AIDS IN THE PRESENTATION OF THE FILM

* GENERAL SUGGESTIONS

To obtain full appreciation of the information presented in the Milk as Food film, the group to whom it is presented should be prepared for it. *The titles of all the scenes should be read and discussed before the film is shown.* The synopsis suggests subject matter which will make the film of greater educational value. The subject Milk as Food, is so important to the health and welfare of every community, that the lesson presented is one of practical value in any schoolroom or in a community gathering. When the titles appear upon the screen, they should receive careful attention. After

the film has been shown, questions and discussions serve to increase the interest.

The synopsis gives the instructor full information of the content of the film. The film is best presented when the class has had the above preliminary preparation concerning Milk as Food. *So important is this topic in the practical development of children, that the lesson should be given to the same group several times during the term. If the film is presented more than once, any false impressions may be corrected and the facts to be learned are clinched.*

REFERENCES

BOOKS

1. Broadhurst—*Home and Community Hygiene*, page 62.
2. Farrington and Woll—*Testing Milk and Its Products*.
3. Klein—*Principles and Practice of Milk Hygiene*.
4. Rosenau—*The Milk Question*.
5. Snyder—*Dairy Chemistry*.
6. Wing—*Milk and Products*.

PAMPHLETS

1. The Department of Agriculture at Washington, D. C., has pamphlets upon milk.
2. The Agricultural Experiment Station in each state will send information upon milk.
3. The Health Department of the large cities will

send upon request definite directions for the care and use of milk.

Film Lesson IV

METHODOLOGY *

SPECIFIC METHODOLOGY USED IN TEACHING THE ENGLISH LANGUAGE THROUGH THE USE OF MOVING PICTURES.

Quotation—"Seeing is merely a factor of the learning process. Learning is the effect of thinking, feeling, doing; so unless the visual impression is seized upon vigorously by discussion, questions and pupil expression it has much less value than is commonly believed.

"The biggest task in the field of visual instruction is the actual elaboration of a specific methodology."—Joseph J. Weber, Ph.D.

I. EQUIPMENT.

In order to vitalize this experimental work with motion pictures, a wall map of the United States and a folding blackboard were installed in the projecting studio for the use of the students and the teacher in charge. A piano helped materially in the teaching of correlated patriotic and folk songs.

II. THE WORK OF THE TEACHER IN CHARGE OF MOTION PICTURE LESSONS IN AMERICANIZATION CLASSES.

Each picture was studied before presenting it to the

* A sample film taken from a report by Maude E. Aiton, principal of Americanization work in the public schools of Washington, D. C., and Helen C. Kiernan, teacher assigned to motion picture work.

student group. Points to be emphasized and new vocabulary were noted.

An outline was prepared for the teachers whose students attended the motion picture lessons. In this outline were given:

- a. The name and brief description of the picture.
- b. New words to be taught.
- c. References.

Questions and problems for the discussions following the showing of the film were prepared.

A report was made of each motion picture lesson.

III. ALLOTMENT OF TIME.

Seventeen lessons were given. Nine films were shown. It was planned to have the lessons given every Tuesday evening. The attendance on the first evening was too large, however, so the plan had to be changed. The use of the projecting studio was given for Tuesday morning at 11 o'clock and Tuesday evening at 8 o'clock. These lessons were given to students of the intermediate and advanced adult classes.

The morning lesson in the studio lasted one hour; the evening lesson an hour and a half. The first showing of the film took fifteen minutes; the discussion twenty minutes; the second showing of the film fifteen minutes; the teaching of a correlated song or poem, or prose selection ten minutes or longer.

IV. PICTURES USED.

The motion pictures used in this course were selected from those produced and distributed by the United

States Department of Agriculture and were as follows :

Uncle Sam, World Champion Farmer

Keeping Out Bad Food

Sugar Cane and Cane Sugar

Building Forest Roads

National Bird Refugees

Bees—How They Live and How They Work

White Pine, Beautiful and Useful

(These are one reel films shown in fifteen minutes)

The Spirit of Lincoln—a two reel film distributed by
The Lincoln Memorial University and

Be Careful—A Crandall film specially made in
Washington for "Safety First" week were also used.

V. THE MOTION PICTURE LESSON.

a.—*Preparatory Work.*

The preparatory work for the picture lesson was taken up in the classroom the day before the presentation of the film. This consisted of the development of the new vocabulary; ascertaining of location of places to be shown in the next picture; informal talks by the students; reading of reference material.

b.—*The First Showing of the Picture.*

During the first showing of the picture the titles were read by the teacher in charge. The students were encouraged to converse with one another about the picture and to ask questions while the picture was being shown, thus insuring speaking and thinking in English. This is the most important point to be noted. The value of the language lesson is lost without it.

c.—*The Discussion.*

Participation and contributions by the students was

the aim of this part of the work. Questions were asked by the teacher and by the students. Problems were stated and discussed, students talked to the student group about their experiences in the particular industry shown in the picture. Such remarks as, "Speak slowly," and "Speak louder," "I cannot understand you," coming as they did from the students themselves, inspired the speaker with an effort to make himself understood.

d.—*The Second Showing of the Picture.*

During this showing of the picture the titles were read by individual students or sometimes by the students in unison. Conversation about the picture as it was being shown was carried on as before, special points brought out in discussion were noted.

e.—*The Teaching of Correlated Material.*

The words of the correlated song or poem were projected on the screen and read by the students. Questions were asked about parts not understood. After a drill on pronunciation of the new words, individual students were asked to read the selection. If a song were being taught, the melody was played and the song sung slowly at first. The second time the song was sung with the correct tempo.

f.—*Written Work*—or articles for the "Americanization Bulletin" (the students' monthly publication).

This written work usually took the form of a composition. Sometimes a letter was written to a friend telling him about the picture. Sometimes the letter was written to the teacher telling her of the value of the picture lesson to the foreign group of students.

LESSONS

The following detailed report of lessons given is made so that teachers may understand the necessity for careful preparation, the opportunity which should be given for much use of the language, the possibility for using correlated material and the contributions made by the students.

These are reports of lessons actually given.

Film: "Uncle Sam, World Champion Farmer"

I. OUTLINE FOR TEACHERS OF INTERMEDIATE CLASSES WHOSE STUDENTS ATTEND MOTION PICTURE LESSONS

The Department of Agriculture 1 reel film, "Uncle Sam, World Champion Farmer," will be shown at 10 A. M. and 8 P. M. Tuesday, July 10, 1923.

The showing of the film will take fifteen or twenty minutes. A discussion will follow and the picture will be shown a second time.

This picture shows the Agricultural Products of the United States and is of educational value.

Vocabulary to be taught

ingenuity	truck farming	machinery	males
acreage	cabbage	cantaloupes	sheep
wheat	celery	ladder	swine
tractor	lettuce	cotton	apple crop
	potatoes	horses	strawberry

References

Frye—*First Steps in Geography*, pages 56-61 inclusive.

Keller and Bishop—*Industrial and Commercial Geography*, pages 30, 31, 51.

Department of Agriculture Bulletins may be found in moving picture file.

Bulletins and Pamphlets—Bureau of Plant Industry (in motion picture file).

Geography

Lists to be posted in classroom and used for reference.

<i>Wheat States</i>	<i>Corn States</i>	<i>Cotton States</i>
Montana	Nebraska	N. Carolina
N. Dakota	Kansas	S. Carolina
S. Dakota	Iowa	Georgia
Nebraska	Missouri	Alabama
Kansas	Indiana	Tennessee
Oklahoma	Ohio	Arkansas
Minnesota		Mississippi
Missouri		Louisiana
Illinois		Oklahoma
Indiana		Texas
Ohio		
Pennsylvania		
Washington		
Oregon		

II. DISCUSSION FOLLOWING PRESENTATION OF THE PICTURE *

WHEAT.

What is the name of the picture you have seen?

What does it show?

* Participation by the students was the aim of this part of the work. Questions by the students were encouraged. Talks by students contributed to the value of the discussion.

Why is the U. S. the leading agricultural country in the world?

1. Soil.
2. Climate.
3. Energy of the people.
4. Help of the Government for scientific agriculture.
5. Transportation system.

How many have seen wheat growing in other countries?

Where is the wheat belt in the United States?

Locate 14 states that are in the wheat belt.

What three large rivers are in this section?

Have all wheat countries machinery like that which you have seen in the picture to-night?

The machine drawn by 32 or more horses is called a combined harvester or "combine" and performs 5 different kinds of work.

1. Cuts the wheat.
2. Gathers it.
3. Threshes it.
4. Cleans it.
5. Sacks it.

Before the harvester goes by there is a field of grain and after there is a row of sacks of wheat. Everything is done by horse or steam power except sewing up the sacks.

Who knows what work is done by the machine which has the long chimney?

CORN.

What is the most valuable crop in the U. S.?

Will some one locate the states which are included in the Corn Belt?

Why does corn play an important part in the history of the country?

How much of the corn is fed to people? How much is exported to other countries?

How much of the corn do the people of America use?

How does the housekeeper cook corn for dinner?

COTTON.

What kind of climate is necessary for production of cotton?

There are ten states in the Cotton Belt. Please locate them.

What difference did you notice between the method of gathering wheat and the method of gathering cotton?

Several machines have been invented for the picking of cotton.

There are two objections against the use of these.

1. They have injured the cotton.
2. Not all the cotton balls ripen at the same time.

POTATOES.

The potato was discovered by the Spaniards when Pizarro conquered Peru. It was taken by them to Europe.

The Potato States are Maine, New York, Pennsylvania, Ohio, Michigan, Wisconsin, Iowa and Minnesota.

Locate them on the map.

FRUIT.

What fruits grow in the North?

What fruits grow in the South?

What is the principal fruit state?

Good transportation facilities have helped to make California a great fruit state.

CATTLE.

The cattle industry has moved steadily west and is now in the region beyond the Mississippi River.

The cattle raising states (1920 Census) are—

HOGS.

The pig goes with the corn belt so the corn belt is also the swine belt.

SHEEP.

Locate the four sheep raising states.

III. REPORT ON MOTION PICTURE LESSON

(Note: These reports are of special value in showing how picture was used.)

The motion picture shown was Uncle Sam, World Champion Farmer, produced and distributed by the Department of Agriculture, Bureau of Plant Industry.

This picture shows how the United States leads the world in food productions.

The picture was shown at 10 A. M. for the morning classes. Attendance for this lesson was 40.

During the first showing the titles were read by the teacher in charge. The map was used for the location of states in the Wheat, Corn, and Cotton Belts, of the

Potato raising states, Cattle and Sheep raising states.

The modern machinery methods of harvesting wheat were noted by the students and compared with methods used in other countries.

Interest was shown in the picture of the potato digging machine.

The cotton pickers' method was contrasted with that of the harvesters. Many students said that they had never known how the cotton is picked.

The blackboard was used to note the uses of wheat, the distribution of corn, names of other wheat and corn countries and the historical development of wheat, corn, potatoes and cattle in this country.

The discussion lasted 30 minutes.

During the second showing of the picture the titles were read by the following students: Napoleon Alcantara, Aime Verbeeck, Louis Zanoft, Mrs. Pauline Kobtzeff, Ida Rubin.

(Note: The sentences in the titles were read distinctly. The students, however, had difficulty in reading figures such as "50,000,000; 73,000,000; also in pronouncing "produce, product, produces, producing, production and rival.")

The picture was shown at 8 P. M. for the evening classes. Attendance for this lesson was 75.

After the showing of the film the students joined in the discussion, answered questions, pointed to places talked about on the map, and talked about products in other countries.

Discussion lasted 30 minutes.

During the second showing of the picture the titles were read by Mr. Ramiro Fernandez.

IV. CORRELATED MATERIAL

The words of the song "America the Beautiful" were projected on the screen and read by the students. The phrases "Amber waves of grain" and "fruited plain" were readily understood by the foreign students after having seen the picture.

O, beautiful for spacious skies,
 For amber waves of grain,
 For purple mountains' majesties
 Above the fruited plain.
 America, America, God shed his grace on thee
 And crown thy good with brotherhood
 From sea to shining sea.

An old negro cotton picker shown in this picture at work in the cotton field suggested the song "Old Black Joe." The words of this song were projected on the screen and read by the students.

"OLD BLACK JOE"

Gone are the days when my heart was young and gay,
 Gone are my friends from the cotton fields away,
 Gone from this earth to a better land I know,
 I hear their gentle voices calling, "Old Black Joe."

CHORUS

I'm coming, I'm coming, for my head is bending low,
 I hear their gentle voices calling, "Old Black Joe."

V. WRITTEN WORK

The following is an article written for the school newspaper by a student in the Americanization Motion Picture Class:

UNCLE SAM, WORLD CHAMPION FARMER

The picture which I saw July 6th was about the agriculture industry in the United States. The first picture showed how the wheat grows and how it is cut with the "harvester machine," which cleans the wheat, makes bundles and puts it in the sacks all at the same time. The machine is drawn by 32 horses. After the wheat is cut and put into sacks, the seeds are separated from the straw in a special machine which is called a "separator." The men put the wheat into the machine with a shover. The straw or chaff blows out of the pipe.

The United States is the first in wheat production. Some of the wheat is consumed in the United States, some is used for seed and some is exported. The remainder is held for other years.

The second picture was about corn—how it grows and how it is put into stacks. Corn is an American product. The first colonists were taught by the Indians to produce it. Ninety per cent of corn is used for feeding animals. Only 9 per cent is used for people.

The next picture was about fruit and vegetable production. Apples, lemons, cabbages, potatoes and lettuce were shown. The picture showed how the potatoes are dug by a machine. The machine digs up the potatoes and a man puts them in a basket.

The first people who introduced cattle into the United States were the Spanish people. They brought the cattle into Florida and in 1820 the colonists went into Texas and worked at cattle raising. Now the cat-

the raising is in the West. Many sheep, horses, and mules are raised in the United States.

Katie Feldstone.

(Has been in America 8 months)—(Russian).

Film Lesson V *

AN INTRODUCTORY WORD

The film lesson is a remarkably effective teaching tool. In the hands of superior teachers it is destined to become the "seven league boots" of the schoolroom. Great educational strides may be taken. The film lesson puts into the teacher's hand all the teaching power in action, superior personalities, wholesome environments, narration, dramatic and educational interest, thus speeding up intelligence and multiplying the effectiveness of the teacher a hundred fold.

Keen edged as it is, this teaching tool must be handled carefully and the method of its use must be pedagogically scientific. Anything that educates a child must start from within and must result in thinking and acting. Thus the film lesson *becomes educational only as it results in conduct*. The film lesson, in other words, must set the child *at work* and *not do the work for him*. Let us illustrate: The film lesson pictures a girl making a garden in her back yard. The several processes in garden making are clearly defined. The boy who sees the action-pictures may get the impulse to make a garden; furthermore, direction may be

* This is Lesson 1 of a manual to accompany "Citizens in the Making," a film text composed of Thirty Lessons, by F. S. Wythe, Neighborhood Motion Picture Service, Inc., 131 W. 42nd St., New York City.

given to the impulse but the film lesson becomes *educative* only when the boy puts his impulse into action and reacts to the "feel" of making his garden, a perfect recitation on how to make a garden, to the contrary notwithstanding.

We desire to emphasize that the film lesson is a classroom accessory only educative in nature as it is scientifically used and to caution the teacher against resting the case on information alone as projected on the screen.

May we urge careful study and trial of the methods suggested in "Film Lesson Plans," inviting at the same time your coöperation in perfecting classroom procedure as it relates to film lessons?

TWENTIETH CENTURY PILGRIMS

(Immigration)

THE LESSON PLAN

CIVIC CONTENT:

Why foreigners come to America:

- a. Drudgery and meager economic returns in Europe.
- b. Seeking freedom in speech and religion.
- c. Exaggerated reports of wealth easily acquired.
- d. Every man has, or may have, a word in government in America.

How foreigners judge America:

- a. By first impressions of Americans. (The kindly act.)

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b. By interested and just treatment.

GENERAL TOPIC AIM: To focus the attention of the children on the immigration problem; to develop reasons for immigration; to suggest a first step in the process of Americanization.

SPECIFIC LESSON AIM: To teach boys and girls to respect foreigners, and to treat them justly.

MOTIVATION: (1) A classical painting; (2) attractive *personalities*; (3) *action-pictures*; (4) *narration*; (5) novelty in a supposition.

LESSON PSYCHOLOGY: An appeal to the social instinct of children—sympathy for those in distress.

TEACHER'S PREPARATION: (1) Familiarity with the lesson story and the underlying civics portrayed; (2) a review of the synchronized paragraphs; (3) careful reading of leaflets accompanying this lesson; (4) preliminary showing of film.

NOTE: Since the words in italics represent lesson motives which are a part of every lesson, they will be omitted, although read between the lines, in the following lesson plans.

LESSON STORY

PART I

Father Bernard, working in the field of his little farm in Western Europe, straightens his aching back to note with concern his children, Louise and Emile,

tired with the long hours, laboring near at hand. Discouraged with the outlook for his children and troubled about his wife's health, his eyes turn toward her. Even as he looks, worn out with the additional burden of long hours in the field, Mrs. Bernard falls exhausted.

Alarmed, the husband and children assist the wife and mother to the little house, where the father pours out his discontent and worry to Grandmother Bernard. Comforting him, she remembers the letter which has just arrived from America for her son. He opens it and reads aloud the invitation to come to America. As he reads, the home which he longs for in America visions in. Brother Frank in America has written before urging Pierre to bring his family to the land of opportunity. *Now* there is no desire to remain and furthermore no excuse for the letter contains a draft which will more than meet the expenses of making the trip.

In great anticipation the Bernard family make their arrangements for departure and with few regrets take ship for America.

All the pictures of America recorded in the minds of Emile and Louise are revived. On board the steamer they discuss what they expect to find in the new land. They imagine themselves at booths where candy may be had for the taking; at the parks where ponies are free. Each mounts a pony and they ride through wondrous castles. In a mountainous district they discover a sign, "Free gold. Take all you want." They help themselves from bags of gold at the entrance of the mine. While filling their pockets in great excitement, a feathered Indian head is silhouetted from

the tip of an adjoining rock. The Indian rises, draws his bow, and imbeds an arrow in Emile's back. Frightened, Louise pulls out the arrow. Together they flee, pursued by the Indian.

Living their own imaginative stories Emile and Louise look about them in alarm, rise and hurry to their parents. Father Bernard allays the fears of Louise and Emile.

PART II

After an uneventful trip the Bernards enter the harbor of New York. The Statue of Liberty and the great buildings astound them. The ship ties up at the wharf and empties its load of human freight. Confused by the turmoil, the Bernards follow timidly the guide who presents herself. She leads the way to a secluded spot and says, "Wait here until I return." The Bernards, fearing later that they have been forgotten, determine to try to find the railroad station. Soon the traffic confuses them. Their timid requests for assistance are brushed aside in the rush of business. Two boys, noticing the helplessness of the foreigners, unfeelingly fasten the rope which trails from a hamper carried by Father Bernard to a lamp post. As the family continue their wandering the rope tightens, the hamper is jerked to the sidewalk.

It bursts open, displaying the wreckage of a prized heirloom and Louise's doll. This is the climax. Mother Bernard gives way to her distress. At this moment a little girl who has seen the episode from her

secure seat in an automobile comes to the assistance of the Bernards. She tries to comfort Mother Bernard and volunteers her help. The little girl's father arrives. He learns of the incident and the difficulties of the Bernards. Inviting the family into his automobile, he drives them to the railroad station and sees that the Bernards proceed safely on their journey.

THE LESSON

This and lesson plans which follow from time to time presuppose a mechanical arrangement such as outlined in the pages on "Film Education," namely, the use of the film lessons in the classroom or a place where the *intimacy of teacher and pupils will not be lost*. The motion picture projector and film lessons are a classroom tool to be used much as are globes and maps.

1. *Method of approach*: Connect the child's experience with Americanization. Discuss the problems dealing with the foreigners in the immediate vicinity—the Chinese, the Japanese, the Greeks, the Hindus, the Swedes, the Italians, etc. What privileges do we enjoy in America not found in foreign countries? Where were your parents born? Where were you born?

2. *Project the film lesson*. Avoid distracting discussion while the lesson is in action on the screen. A word or two at opportune moments are not objectionable. Let the children give their full and undivided attention to the film. They will enjoy it as they do the story read in its entirety in the literature lesson.

4. How do foreigners first judge America?

Special Problem Questions.

1. Did you like the picture lesson? Give a reason for your answer.

2. Discuss the personality of each individual in the picture.

3. Why is America the land of opportunity for boys and girls?

4. Where had you rather attend school—Germany or America? Why?

5. What is the average daily wage in China, Sweden, France, England, America?

6. In what part of Europe are the scenes laid? Give reasons for your answer.

7. How did Uncle Frank in America send money to his brother in Europe?

8. How long do you think it took the ship to cross the ocean?

9. Who was the busy woman who told the Bernard family to wait until she came back, on their landing in America?

Project work.

1. Formulate an Americanization program for your school. For yourself.

2. Who was Millet? Prepare a brief sketch of his life. Make a list of his best pictures.

3. Give details of immigration—passports, transportation, custom house, etc.

4. What is the governmental immigration program?

5. Discuss reasons for immigration of the Pilgrims, our forefathers.

6. What do the people of the several European countries have to say about government—England, France, Russia, Germany, Italy, etc.?

7. Bring in a report on the comparative wages paid laborers in Europe and America.

8. If possible visit an immigration station as a lesson.

SUGGESTIONS

Radiating from each film lesson are avenues along which the class may travel with profit. Speaking in concrete terms, let us examine the Problem Questions and Project Work which are suggested by action-pictures in the film lesson.

Who was Millet?

In what part of Europe are the scenes laid? Give reasons for your answer.

Why did Father Bernard want to go to America?

Why was his brother in America anxious that he should come?

The action-pictures conveying the answers to these questions are "open sesame" to the field of art, geography of Europe, and its social and economic life.

How did Uncle Frank, in America, send money to his brother in Europe?

How long do you think it took the ship to cross to America?

Where did Emile and Louise obtain their peculiar ideas about America?

Who was the busy woman who told the Bernard family to wait until she came back, on their landing in America?

Why were the Bernards confused in making their way?

What is your opinion regarding the "joke" played by the boys on Father Bernard?

How do foreigners judge America?

These questions, respectively, open studies involving world exchange, high seas transportation, avenues of communication between nations, an Americanization program for foreigners, and *native-born* as well.

Thus the thread of the Bernard family and their experiences may be woven into the *whole day's work*. The presence of Emile, Louise, and the parents, in the classroom may be used to advantage by the skillful teacher to motivate the day's program.

SUGGESTED PLAN FOR THE WEEK'S WORK

The prime purpose of the film lesson as an integral part of the civic period is to motivate the civic content for the day and the rest of the week. The interest generated by the film should be sustained.

FIRST DAY. The lesson as outlined above.

SECOND DAY. Recitation on civic content correlated with the film lesson as *found in the class text*. Individual assignment of Problem Questions and Project Work.

THIRD DAY. Discussion of the preceding day's assignments.

FOURTH DAY. Library day. Readings and reports

on assignments made from list under Pupils' Reading.

FIFTH DAY. Reports on assignments from Project Work as yet uncompleted. Review or field excursions, observing principle under discussion at work in the large.

PUPILS' READING

"LANDING OF THE PILGRIMS" *Felicia Hemans*
LIFE OF MILLET

With copies of best known pictures—"The Angelus," "The Gleaners," "Man with Hoe," etc.

AMERICA—"My Country, 'Tis of Thee—"

"MAN WITH THE HOE" *Edward Markham*

"THE SONG OF THE LARK" (Picture) *Jules Breton*

"THE PILGRIMS, 1620-1630," *Sara R. O'Brien*

From "English for Foreigners," Book II., Houghton Mifflin Co.

"LITTLE ATHENS MESSAGE" *Anna Doan Stephens*

The Peace Association of Friends in America.

"CAMP SCHOOL SONG" *C. R. Trowbridge*

Printed for The Society for Italian Immigrants,
129 Broad St., New York City.

STORY OF EDWARD W. BOK, a poor Hollander.

Formerly Editor of "The Ladies Home Journal."

"COURTSHIP OF MILES STANDISH" *Longfellow*
(Also picture, by Taylor.)

"THE PILGRIM FATHERS"; "PLYMOUTH ROCK" *O'Reilly*

"THE PILGRIM FATHERS" *Wordsworth*

GOVERNMENT AND THE CITIZEN . . . *Roscoe Lewis Ashley*

California Edition (1908), Macmillan Co.

P. 194, Sec. 206.

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THE NEW CIVICS *Roscoe Lewis Ashley*
(1908), Macmillan Co.

P. 42, Secs. 39-49.

AMERICAN GOVERNMENT *Roscoe Lewis Ashley*
New and Revised Edition (1917), Macmillan Co.

P. 287, Sec. 290.

CIVICS—STUDIES IN AMERICAN CITIZENSHIP

..... *Waldo H. Sherman*
(1905), Macmillan Co.

Part II., p. 212.

CIVIL GOVERNMENT IN CALIFORNIA *John Richard Sutton*
American Book Co.

Chap. 13, p. 256.

OUR AMERICA—THE ELEMENTS OF CIVICS *John A. Lapp*
Bobbs-Merrill Co.

Chap. 5. pp: 49-53;

Chap. 25, pp. 300-330.

MY COUNTRY—A TEXT BOOK ON CIVICS AND PATRIOTISM
FOR YOUNG AMERICANS *Grace A. Turkington*
Ginn & Co.

Chaps. 1, 2, 3.

GOVERNMENT IN STATE AND NATION

..... *J. A. James and A. H. Sanford*
Revised Edition, Charles Scribner's Sons.

LESSONS FOR JUNIOR CITIZENS *Mabel Hill*
Ginn & Co.

Pp. 168-185.

CIVICS—THE COMMUNITY AND THE CITIZEN

..... *Arthur William Dunn*
State Printing Office, Sacramento, Cal.

Chap. 7, pp. 34-37.

- AMERICAN CITIZENSHIP *Charles A. Beard and Mary Ritter Beard*
(1914), Macmillan Co.
Pp. 196, 197, 202.
- CITY, STATE, AND NATION *William L. Nido*
(1917), Macmillan Co.
- COMMUNITY CIVICS *Jessie Field and Scott Nearing*
(1916), Macmillan Co.
- THE GULICK HYGIENE SERIES ... *Frances Gulick Jewett*
Book III, Town and City.
Ginn & Co.
- CIVIL GOVERNMENT SIMPLIFIED *J. J. Duval*
(1919), Harr Wagner Publishing Co., San Francisco.

SPECIAL AIDS

Have the children write for printed matter to national and state agencies concerned in the problems of the immigrant.

JUNIOR RED CROSS, National Headquarters, Washington, D. C. Publications relating to international correspondents and junior adoptions.

SOCIETY FOR THE FATHERLESS CHILDREN OF FRANCE.

TRAVELERS' AID, 25 West 43rd Street, New York City.

UNITED STATES BUREAU OF EDUCATION, Washington, D. C. Especially reports and teachers' leaflets of A. W. Dunn, specialist in civic education, and the annual reports of the Commissioner of Education.

COMMISSIONER GENERAL OF IMMIGRATION, Annual Reports, Washington, D. C.

BUREAU OF IMMIGRATION AND NATURALIZATION, Immigra-

tion Laws and Regulations, Chinese Exclusion Act, Washington, D. C.

DEPARTMENT OF COMMERCE AND LABOR, Special Consular Reports, Vol. XXX, Emigration to the U. S. (1904).

NATIONAL CIVIC FEDERATION, New York, Reports of Conferences of Immigration Department, Sept. 14 and Dec. 12, 1906.

AMERICAN NATIONAL SECURITY LEAGUE, 19 West 44th St., New York City. Pamphlets on Americanization.

Film Lesson VI

STEPS TOWARD AMERICAN IDEALS

THE LESSON PLAN

CIVIC CONTENT:

The first processes in Americanization:

Kindly and just treatment.

a. First impressions lasting.

Placement in work for which the foreigner is best fitted.

a. State program to place deserving and trained foreigners on the land.

The alien should become the owner of a home.

a. State program to anchor foreigner to America.

b. Participation in civic life. The foreigner gets out of America about what he puts in.

First step in formal Americanization "first papers."

GENERAL TOPIC AIM: To impress upon the minds of the children that much which they enjoy was contributed by foreigners; that America owes a part of

her advancement in science, art, government to foreign contribution; withal to establish a well balanced attitude toward foreigners.

SPECIFIC LESSON AIM: Kindly and just treatment of foreigners by the boys and girls.

MOTIVATION: Appealing situations and pictures of western events. The lesson is built largely on attractive personalities.

LESSON PSYCHOLOGY: An appeal to the social and dramatic instinct; sympathy and assistance to one in distress.

TEACHER'S PREPARATION: (1) acquaintance with the lesson story and the underlying civics portrayed; (2) a survey of subject matter synchronized with the film lesson.

THE LESSON STORY

It is the morning following the arrival of the Bernards at the western home of Pierre's brother. Mother Bernard and his sister-in-law are in the front yard. Louise and Emile, dressed in their cousins' clothes, looking every bit like young Americans, come from the house led by their companions, Clifford and May. In great delight Mother Bernard notes the transformation which has taken place. As the children leave Pierre and Frank come from the house. Dressed in his brother's clothes Pierre looks the part of a well-to-do American rancher. Frank proudly leads his relatives about the farm. The attractive buildings, fields, and well-fed stock show evidence of thrift. Congratulations from his brother lead Frank to relate his experiences in America.

“Soon after reaching America I found work as a member of a railroad traction crew. Dissatisfied with the outlook, I grasped an opportunity to better myself by purchasing an illy-kept farm. I knew I could make the farm pay. Setting Giant powder at work I redeemed the land, and with new tools which I purchased with money loaned by the bank, made the virgin soil produce abundantly. Then Martha came. That was the turning point in my life. The touch of a woman’s hand soon became evident. Martha and I worked and dreamed together. As the babies grew, Clifford and May did their share. Working together we have made our home. You see, brother, the foreigner gets out of America about what he puts in.

“After contending with bad roads season after season and exasperated finally by an afternoon in the mud digging out my truck, I formed a ‘Good Roads Club.’ We worked hard to carry the bond election for better roads but were beaten at the polls because many of us could not vote. This taught me a lesson. I determined to become a citizen of America in all respects. A few years later after a vigorous campaign bonds were voted and you can see the result.”

At the completion of the interesting narrative Martha suggests a ride in the automobile. As the machine gathers momentum the children run up and clamber on the running boards.

A few days later an agent of the State Placement Bureau calls to help the Bernards locate a home. Under his guidance an attractive ten-acre farm close to a thriving city is purchased on attractive terms.

THE LESSON

1. *Method of approach:* Make the children feel a need for the content of this lesson. Bring the subject near to them. What foreigners are living near your home? Has your city or state a problem dealing with foreigners, such as have cities in California and the state itself with the Chinese and the Japanese? What effort is being made to solve such problems? What have foreign nations contributed directly and indirectly to your school and community, your state? Questions of this nature will connect the personal experiences of the children to the subject content pictured.

2. *Show the film lesson.* Avoid establishing the habit of a divided interest. *Do not discuss the picture while it is running on the screen.*

3. *Have the story reproduced* for its narrative properties. Inaccurate observations on the part of the children will result in differences of opinion. These may be settled best *by a second showing* of the lesson.

4. *Question the children* to bring out the civic content of the lesson.

5. *Make use of some method* whereby the impulses which are created during the lesson shall take effect in the conduct of the children. See Lesson I.

6. *Assign work* for the rest of the week.

LESSON QUESTIONS

1. What is the first interest of the Bernards? What impression have you formed as to the home life of Frank and his family? Why?

2. How would you rate Uncle Frank's farm? Who were instrumental in its development?

3. Why does Frank determine to change his occupation? What is the wage of, and the future for men employed on a section "gang"?

4. What is the award of shiftlessness?

5. Contrast the homes of the shiftless farmer and the one established later by Frank. How do you account for the difference? One man is a native-born citizen, the other a foreigner; which one at heart was the better American? Why?

6. Why was Frank confident he could make the farm pay?

7. Where did Frank get money to purchase tools?

8. Why was Frank interested in a "Good Roads Club"?

9. What upset the wise plans of Frank and his neighbor farmers?

10. Explain how the Bernards found their new home.

Problem Questions.

1. What is the purpose of one's life? The accumulation of wealth?

2. What determines one's success. One man failed, another succeeded on the same farm. How do you account for this part of the story?

3. How does the story show the value of practicing thrift?

4. What is the value of good roads? Are the roads in your vicinity good ones? If not, who is responsible? Discuss the steps in laying a state highway.

5. Why should the nation concern itself with a program which should include the placement of foreigners as to work and homes?

6. Why should encouragement be given to foreigners to purchase small farming acreages?

7. What advantages are gained by living and working on a farm?

8. What is meant by "The foreigner gets out of America about what he puts in"? What did Uncle Frank put in? What did he get out?

9. Suggest a method by which the state might assist deserving foreigners to own a home.

10. What do you consider the first informal and formal steps in the Americanization of foreigners?

11. What can the teacher and the children do to assist?

12. Why is the house on the farm so often neglected while the barns are improved?

13. Does the development of the automobile industry bear any relation to improved highways? Give reasons for your answer.

14. What is the first duty and privilege of the citizen in America?

15. What is a silo and how is it used?

Project Work.

1. Formulate a national program for Americanization of foreigners. Of native-born residents.

2. Show the relationship of education and ignorance to the Americanization problem.

3. Show that America has helped oppressed nations.

4. Make a list of our great "Americans."

5. What is an American? How may one become an American? Make out a program step by step.

6. Describe the processes in "Naturalization." What is "Naturalization" for, and who may enjoy its privileges.

7. Make a list of "naturalized" Americans who have served America.

8. Discuss the use of dynamite on the farm.

9. Discuss the purpose of banks, moral and financial credit, how each may be obtained.

10. Explain what superior tools have done for farming.

11. Compare life in the city and in the country.

SUGGESTIONS FOR THE WEEK

FIRST DAY. Film lesson and assignments.

SECOND DAY. Field visit to immigrant stations when possible.

THIRD DAY. Library and study.

FOURTH DAY. Report on problem questions.

FIFTH DAY. Discussion of assignments.

PUPILS' READING

AN AMERICAN BOOK OF GOLDEN DEEDS *James Baldwin*
American Book Co.

HERO TALES FROM AMERICAN HISTORY

..... *Henry Cabot Lodge and Theodore Roosevelt*
Century Co.

STORIES OF DANIEL BOONE, EARLY SETTLERS,
GEORGE WASHINGTON, WILLIAM PENN, ETC.

- "PIONEERS! O PIONEERS!" *Walt Whitman*
 "HUMAN BROTHERHOOD" *Whittier*
 "THE BUILDING OF THE SHIP" *Longfellow*
 "THE FATHERLAND" *James Russell Lowell*
 "THE BALLAD OF EAST AND WEST" *Kipling*
 "RIP VAN WINKLE" *Irving*
 "THE PATHFINDER" *Cooper*
 "LITTLE ATHENS MESSAGE."
 "THE PATHFINDERS, LEWIS AND CLARK" from
 "The Children's Hour,"
 Vol. VIII. *Eva March Tappan*
 Houghton, Mifflin Co.

STORY OF LAFAYETTE, OF PASTEUR'S WORK, OF ITALIAN
 MUSIC AND ART, ARCHITECTURE AND ENGINEERING;
 SPANISH MISSIONS IN CALIFORNIA; OUR LAWS
 FOUNDED ON THE OLD ROMAN AND ENGLISH LAWS,
 ETC.—Showing what we owe to foreigners.

TEXT REFERENCES

- GOVERNMENT AND THE CITIZEN .. *Roscoe Lewis Ashley*
 California Edition (1908), Macmillan Co.
 P. 1 to Sec. 4, P. 4;
 P. 9, Sec. 10 to P. 13;
 Chap. 6;
 P. 215, Secs. 226-230, 237.
 THE NEW CIVICS *Roscoe Lewis Ashley*
 (1918), Macmillan Co.
 Chap. 1, Secs. 1, 2, 3, 7-8, 12, 16-20;
 Chap. 2, Secs. 22-25, 28-32;
 P. 159, Secs. 144-146;
 P. 184, Sec. 170;

P. 269; Secs. 242, P. 275;

P. 346, Secs. 305, 306;

P. 357, Secs. 314, 318.

AMERICAN GOVERNMENT *Roscoe Lewis Ashley*
New and Revised Edition (1917), Macmillan Co.

P. 8, Secs. 9, 10;

Chap. 10, Secs. 123-126;

P. 211, Secs. 222-224;

P. 267, Secs. 275-279;

P. 281, Sec. 284;

P. 287, Secs. 290, 291.

CIVICS, STUDIES IN AMERICAN CITIZENSHIP

. *Waldo H. Sherman*
(1905), Macmillan Co.

Part I., Pp. 16, 17;

Part II., Pp. 208-217.

CIVIL GOVERNMENT IN CALIFORNIA

. *John Richard Sutton*
American Book Co.

P. 159, Sec. 108.

OUR AMERICA—THE ELEMENTS OF CIVICS

. *John A. Lapp*
Bobbs-Merrill Co.

Chap. 1, especially Pp. 7, 8;

Chap. 5, especially Pp. 49-51;

Chap. 8, especially Pp. 91-94;

Chap. 25, Pp. 300-301;

Appendix, "Secretary of Interior," Pp. 335, 336.

MY COUNTRY—A TEXT BOOK IN CIVICS AND PATRIOTISM
FOR YOUNG AMERICANS *Grace A. Turkington*
Ginn & Co.

Chaps. 4, 5, 7.

GOVERNMENT IN STATE AND NATION

.....*J. A. James and A. H. Sanford*

Revised Edition, Charles Scribner's Sons.

Chap. 9; 20, Sec. 1;

Chap. 28.

SPECIAL AIDS

Through the children correspond with organizations concerned with the immigrant problem.

BUREAU OF LABOR, Seventh Special Report, The Slums of Baltimore, Chicago, New York and Philadelphia (1894). Ninth Special Report, The Italians in Chicago (1897).

HULL HOUSE MAPS AND PAPERS, New York (1895).

NATURALIZATION, Report to the President of the Commission on Naturalization, November 8, 1905, 59th Congress, 1st Sess. H. R. Doc. 46.

BUREAU OF NATURALIZATION, Washington, D. C. Naturalization laws and instructions for applicants for citizenship.

STATE COMMISSION FOR IMMIGRATION AND HOUSING.

AMERICAN NATIONAL SECURITY LEAGUE, 19 West Forty-fourth Street, New York City. Pamphlets on Americanization.

CHAPTER VI

A TENTATIVE PLAN FOR A MOTION PICTURE LESSON

Let us consider in one place the various factors mentioned heretofore in other connections that must constitute the frame work of a methodology dealing with the film as a teaching instrument.

The six representative film lessons of Chapter V present type lessons by five different educators. In one case, two of the lessons are presented from the same author. (Immigration, and Steps toward American Ideals—Wythe.) In an inductive study, a comparison of these will reveal certain procedures common to all of them, and certain others that differ. These may give us a start toward a partial generalization of practices obtaining among representative educators.

1. Film Synopses Necessary

It will be noted at once that all of these lessons first isolate the film titles (sub-titles), these titles in correct sequence being called a synopsis. Most educational films now are accompanied with a synopsis.

It is evident that the teacher needs to know these to determine what is lacking in information or directions supplementary to the picture, and also whether they

are suited, in meaning and form, to the purpose of the lesson, and the spirit of the school.

Sometimes titles are too many or too long and involved. In this case the teacher—or preferably the visual education committee or department, where the operation of cutting and patching the film is understood—should cut out the undesired portions, taking care to see that they are restored later. The film continuity would be more valuable than the synopsis, since the continuity contains not only the titles but descriptions of the scenes and action of the picture as they occur in sequence with the titles. Where the teacher previews the film, the continuity is not essential.

The later issues of the Ford leaflets give “explanations” of the scene following each title. But most of them do not describe the action so much as they insert the supplementary facts. This puts the additional information directly where it is needed in the film, with a possible danger of the teacher making too mechanical use of it. The Analytic arrangement in the earlier Ford leaflets presents a more accurate view of the topic as a whole, and the sub-topics are seen in better perspective.

2. Statement of Supplementary Facts

All of the six lessons print for the teacher additional facts about the topic, from which the teacher may select those she thinks most desirable for discussing. The earlier Ford issues present these in analytical form, adding greatly to the clarity of the topic. With regard to any new type of illustrative material or a

new plan of recitation, teachers are sometimes afraid that the *new* work will mean *more* work for them. This need not be the case. While the teacher with the time and inclination will always pursue independent research, the busy teacher, in the case of these films, will find the most necessary supplementary facts furnished her on the leaflets, and will not need to search through encyclopedias and other books and pamphlets.

3. References or Bibliography

All of the lesson leaflets supply the teacher with a list of books, pamphlets, etc., containing a still wider range of facts regarding the topic.

Consulting some of these under the teacher's guidance will constitute a form of research for the pupils. DeVry gives other illustrative material, bearing on the same topic, in the form of films, slides and press pictures.

4. Suggestive Questions

The Ford leaflet on milk does not contain questions, but since many other of the Ford leaflets do include the questions, *it seems proper to list questions as a fourth characteristic of all of the leaflets.* In the later issues of the leaflets accompanying the Ford Educational Library releases, the authors go a step further than the others (except DeVry) and suggest which questions come before the film showing, and which

after. DeVry distributes the questions under Oral Introduction, Film Presentation and Follow-up Work.

5. Oral Introductions

Four of these authorities use some sort of introductory statements at the beginning of the lesson. Pathé omits this feature. Ford gives an "educational purpose" directed to the teacher, rather than to the children. The other three lessons (DeVry, Wythe and Aiton) give suggested oral introductions framed from the pupil's viewpoint. Miss Aiton's lessons, using the films for training in English, present both an oral and written study of "Words to be Taught" at the beginning of the lesson. The Ford leaflet suggests that the teacher read the titles to the pupils before the film is run. There is a question here if this practice would not become mechanical if used for all pictures. It would tend also to reduce the element of novelty, sometimes a help, and sometimes a hindrance to the work in hand.

6. "Talking" with the Film

Some of these lessons make no reference to "talking with the film," but all of these imply that the teacher will ask questions both during the running of the film and after the showing. If questions are asked, response is expected; so *the rule is that teacher and pupils talk and discuss during and after the film showing.*

Three of the series indicate the specific points for oral discussion as the film unwinds and one (DeVry) indicates the stop-on-film points which may be used where a projector is employed having a stop-on-film shutter.

This simple little device is likely to influence very materially the conduct of a film lesson, as well as the construction of the film itself. As soon as it is widely adopted, title footage can be reduced radically, and class discussion can become a much more prominent and natural feature of film lessons, as the stoppage of the film not only reduces noise, but stops the rush of the pictures, giving time for composed thought, and closer observation at any point.

Some of the Ford leaflets advise against too many questions during the film presentations, as making for confusion,* claiming that most of the questions and discussion should be saved for the review or quiz period.

Some of the factors which would determine the amount of talking attempted during the running of the film are the strength or weakness of the teacher's voice, nervousness under a definite speed pressure, familiarity with projector operation, adaptation of the film to the educational status of the children, the predominance of emotional or intellectual appeal in the

* "When teachers object that motion pictures move too rapidly for the child, they are, in reality, confusing rapidity of motion with brevity of scene, which is quite another and much more easily remedied fault. . . . Often it can be remedied by letting the action continue for a longer time or by repeating the action two or more times. Moreover, the film itself can be run a second and even a third time."—*Motion Pictures in Education*.—Ellis Thornborough.

film, the effect of questions and responses, in a partially darkened room, upon the discipline of the class.

7. Repeat Showing of Films

Three of the five authorities practice a second showing of the film. This serves:

1. To clear up mistakes of observation.
2. To recall scenes for further discussion.
3. To stimulate oral or written work by pupils.

DeVry and Aiton make a point of the second showings; the Ford Leaflet seems to advise it, or even a third presentation, as an occasional performance.

The necessity for repeat showings emphasizes the desirability of schools *purchasing their films*, so that a class can use them as often as is necessary. Rental and loan films as a rule have to be returned to the owners too quickly for these repeat showings.

8. Follow-up-Work *

There is quite general agreement among all types of lessons presented, as to provisions for further self-activity of the pupils. This is provided for in the list

* "Caution should be observed to encourage initiative and an intellectually active attitude, and not to allow the use of motion pictures or other visual materials to overdevelop the attitude of passive receptivity. The objection is sometimes made to the use of motion pictures that they make education too easy. This objection misses the real point. If the pupil actually gets the training we wish him to secure, it is no objection that he gets it easily. The real objection is that he never really completes his mastery of a subject merely from having it presented to him. He should make it a working part of his mental machinery. To provide for this, we must encourage discussion, independent reading, problem and project work, and the like."—Professor Frank N. Freeman, in *Visual Education*.

of questions as well as in the references. The DeVry leaflets give it a special heading and make definite assignments in the nature of research and project problems. Miss Aiton's lessons give detailed examples of the compositions, letters, newspaper write-ups, etc., written by the pupils as a result of the film recitations.

Tentative Film Lesson Plan

Having now isolated and examined the characteristics common to a series of film lessons worked out by serious investigators, it is in order for us to attempt a synthesis of these studies in the form of a *Tentative Film Lesson Plan*,* subject, of course, to modifications

* The Visual Education Ltd. has combined both the pedagogical and business phases of visual education in Great Britain and has organized a complete service with machines, lecturers, and films. They have issued a booklet listing their films and service. On the first page they give "The Technique of a Visual Lesson," which they have evolved for visual educationists. It is remarkable for its clarity and its agreement with the best American practices.

THE TECHNIQUE OF A VISUAL LESSON

It will interest educationists to study the lines on which a Visual Lesson is given.

The Visual Lessons provide for careful preparation before the lecture. All the alertness, interest and eagerness to recite which the motion picture has aroused in the class is made use of to the fullest extent.

1. The teacher is given beforehand an outline of the Visual Lesson and of the films which will be shown, in order to coördinate the school teaching with the lecture.

2. The lecturer briefly prepares the class for the film without removing the important element of surprise. He must create the proper mood in which to view the picture.

3. The picture is projected without comment. Should a remark be absolutely necessary, the picture is stopped while the lecturer speaks.

4. The interest of the class is now at its height; questions are asked and a discussion ensues.

5. The film is then shown a second time, wherever possible. This applies particularly to science lessons.

for special types of subject matter, and unusual conditions of projection. This lesson plan would seem to be somewhat as follows:

1. Preview of film by teacher.
2. The writing out of a synopsis of film titles, or in the absence of (1), a continuity.
3. The introductory talk, map study, blackboard work, etc.
4. A limited number of questions during projection (making full use of stop-on-film points for close discussion or observation).
5. Discussion (includes supplementary facts, references, recitation and discussion, further illustrative material), slides, etc., that might add to some of the points made in the film or were omitted by the film. A few of the more important of these might occur under either (3) or (4)—pupil reactions in various forms.
6. Questions after the film is run (including assignment for follow-up work).
7. Second showing of film, either the same day or on subsequent days, for correcting errors of observation or interpretation disclosed in (4) or (5), and for cultivating oral description and composition of the pupils, who at this time may be called upon to explain the scenes and in general tie up the film material with the general course.
8. Tests—written compositions, letters, presentation

6. Answers are now demanded to the specific questions that preceded the picture, and pupils are encouraged to correct one another's mistakes.

of pupil research, and of the tests used in modern school systems.

Nothing approaching a stereotyped formula is here attempted or advocated. One should remember that such a lesson is *not a lesson on the film*; it is a *lesson on a school topic* in the regular course of study, where the film constitutes only one kind of illustrative material.

The Wythe Lessons

The two Wythe lessons on civics are unique in the series of sample lessons, as the film lesson is in story form and the appeal is emotional. These lessons are nevertheless subjected to the most searching pedagogical treatment and the progression of ideas is developed for the teacher in great detail, step by step and question by question. The result sought for the pupils is a changed mental attitude with a corresponding change in conduct toward foreigners. The whole lesson plan is affected by this shift of emphasis from the informational to the emotional point of view.

The "Lesson Story" here takes the place of synopsis of titles or of a continuity. In this case teachers are warned "not to discuss the picture while it is running on the screen." Here the unity and accumulative force of the succession of events would be disturbed by stopping and analyzing. The picture may be discussed after the showing, or in the second showing of the film.

Neither teacher nor pupils are expected to undertake all of the "Lesson Questions," "Special Problem Questions," "Project Work," "Suggested Plan for the

Week's Work," "Pupils' Reading," "Text References," and "Special Aids" given at the close of the Wythe lessons. The principle of selection should be employed.

The Aiton-Kiernan Lessons

In Miss Aiton's * lessons both the blackboard and map were used often during the showing of the film; careful recitation work of this character indicates that *a film of ordinary length should scarcely ever be run off continuously, but there should be frequent stops for questions and discussion.* A projector with stop-on-film shutter is a help to this process, but any projector may be stopped to allow discussion. The projector current should be switched off, and the room lights turned on.

The heading "Correlated Material" occurs only in the Aiton lessons. It is explained by the unique type of students constituting the class. They were adult foreigners taking English and Americanization. The patriotic songs and preamble to the constitution are thus explained.

The summary of the procedure used in the lessons given during 1923, 1924 and 1925 is so succinctly stated in two paragraphs of the Aiton-Kiernan report that they are quoted here for reference:

"A motion picture lesson in its entirety means the previewing of the film and previous study of the subtitles by the teacher; extensive research work; a pre-

* The general plan of the lessons and their supervision was the work of Miss Maud E. Aiton. The actual lessons were taught by Mrs. H. C. Kiernan and Miss Grace Meyer.

paratory lesson which includes the development of vocabulary; showing the film; reading the titles, and leading the students to ask and answer questions during this showing; leading the students to take part in the discussion; following the first showing of the film encouraging them to link the new with a like experience and helping them to tell the latter in English; showing the film a second time; assisting the students' reading of title; teaching a correlated song or poem from the screen. On the following day the students' oral reproductions are given and correlated work is done in spelling, and language work; and reading a letter or a composition on the subject of the picture or a subject inspired by the picture is written by each student. The final step in the lesson is the testing. Tests are planned as follows: five stimulating words, five sentences involving multiple choice, five completion sentences and five thinking questions. These tests are scored for English and content. The student comes to the school to learn English. In the intermediate class students themselves admit that they learn English quickly by the motion picture method."

"Motion picture lessons in the Americanization School require a teacher who believes in the visual way, a teacher who is willing to do much research work, one who carries enthusiasm into the work, who sees that the visual way is the economical way in that a greater scope of content may be covered during the regular lesson period; one who is willing to do much preliminary work with the film, the titles and an extensive bibliography so that the motion picture lesson may serve its purpose, namely, to give to the adult foreign

student the opportunity to visualize immediately that which he hears, speaks, reads, and the opportunity to learn the use of the English language by actually using it." *

Restraint in the Use of Motion Pictures

Every new movement has its "wild oats" period, and visual education is no exception. The wide publicity given to the Edison-Wells statements, in which they predict the coming of the time when films would displace teachers and textbooks in schools, misled a few teachers into intemperate film practices. One had only to have a sufficient quantity of educational films to bring in the new era of teacherless and bookless schools. These quantity doses of films reacted very unfavorably.

It soon appeared that too frequent film lessons nullified the specific contributions which the film had to make to school practice. The freshening of the pools of knowledge, due to variety and novelty, disappeared; there was insufficient time for the introductory step of preparation. The tendency of frequent film lessons was to accept film showings for film lessons. There was not time enough for previews of the films by the teacher, the selection of salient points from irrelevant matter, nor for planning the questioning, reciting, and assignments which would compel digestion of the pertinent material and relate it to the body of knowl-

* It is interesting to compare the successful use of motion pictures in teaching English to foreigners, with the conclusion of Professor Freeman, with reference to its use in teaching a foreign language to Americans. See No. 5, p. 184.

edge and the mental activity already built up around the subject matter.

There resulted a habit of hasty reading of titles and a sort of eye concentration rather than mind concentration. A bare enumeration of objects and scenes was accepted as educational responses. Film schedules required the rapid movement of the films between schools and there was no time for a second running of the film. This second running is a frequent necessity when serious educational work is undertaken with a motion picture.

One Slide to a Recitation

Stereographs and slides have already passed through this quantitative stage in the school classroom. Educational "sets" frequently consisted of from 30 to 50 pictures, and in the early days of their use in schools, the whole set was shown to the class in the recitation period. It scarcely afforded a half minute to a slide; barely time to change the slides in the carriers.

The author at one time conducted a college department of visual instruction. It distributed slides and films to teachers, clergymen and welfare workers of the state. It was interesting to note the preference for slide sets containing large numbers of slides. One minister wrote in that he wanted the slides for an evening service and that it must contain at least 90 slides. If he just pushed through the whole set, one after another, barely announcing the title of each, the exercise would have consumed 45 minutes, and the first effects

of surprise and charm would have been lost after the first ten minutes, in the dull monotony of a slot machine performance.

Obviously, tests made on this sort of slide lesson revealed disappointing results. The Keystone View Company about this time organized their "600 set" to cover the program of the elementary school. Together with the teacher's manuals accompanying the sets they brought order out of chaos. The "600" were listed in small groupings of a few stereographs or slides each and an elaborate cross reference system made one slide do duty in many groups. Cross referencing focused the attention on individual pictures and minimized the value of "sets." Finally, this firm developed a plan of intensive picture study, which made one picture do for a whole recitation. Undiscovered educational values of pictures immediately appeared. There was time for a leisurely and repeated viewing of the picture by teacher and pupil, and observations and interpretations took the place of "seeing."

A Short Length Film Every Two Weeks

The treatment of the educational film is now undergoing the same development. Mr. F. S. Wythe, producer of the series of films on citizenship, and organizer of the Neighborhood Motion Picture Service, Inc., for schools, has had a prolonged and varied experience in handling educational films in schools. His reels now are seldom over 600 feet, and he advocates a film study of one subject every two weeks. Here is a return to sanity and restraint in the use of pictures.

Such intervals give time for the necessary steps of preparation, presentation, reflection and application, characteristic of modern pedagogical procedure. The three film libraries presented in this book offer from four to sixteen films during the school year for any one subject of study—with reels usually well under 1,000 feet. The DeVry educationals average 650 feet and the Bray series much less than this.

Made-to-Order Films in Sight

The ideal way is for teachers to have made up for their classes short strips on the particular topics which lend themselves best to motion picture treatment. Hitherto this has been impossible because producers preferred to rent their own reels rather than accept orders for special scenes made from the negative. Recently the DeVry Corporation has announced a negative library of nearly 200,000 feet of geography and animal topics, from which they will make prints to order of any desired length and in any desired combination, so that even a 50-foot reel can be purchased. It is to be hoped that the larger producers can be induced to open up the wealth of negative they possess to this sort of use in the schools. It will mean some further use at least of negative which in most cases is stored in vaults after only a year or two of use, having no further productive value, which in the end reaches the junk vats for the mere recovery of the silver salts.

Adaptation to Grade

As explained in Chapter I (p. 14), pictures depend

more upon the teachers' questions and explanations for adaptation to grade than they do upon the content of the pictures themselves. The exceptions to this statement are in such obvious cases as complicated machinery or microscopic details; such films are designated as Technical in the lists. Dramas and attempts to picture abstractions are not included in the Libraries recommended in this book.

Daylight Screens

Daylight (translucent) screens have facilitated the use of films in classrooms. In translucent screens the image is seen by transmitted light; in ordinary opaque screens, by reflected light. Since reflecting cloth surfaces absorb much of the light they receive, only a portion of the light is left to convey the image to the eye. Transmitting surfaces on the contrary absorb but little of the light and, therefore, convey a larger part of the light image to the eye; hence their superiority for projection in daylight. However, the eye must receive light rays direct from the illuminant or reflector, so that the light is but little diffused, and both the area and angle of brilliancy are considerably narrower than in the case of reflecting screens. Translucent screens permit film and slide showings to be made in full daylight, if the projector is placed behind the screen, with the class in front. This practice is excellent with small classes, and avoids turning lights off and on. But it is difficult to manage with large classes, since the daylight pictures are brilliant only with small screens.

CHAPTER VII

THREE IMPORTANT STUDIES ON THE USE OF EDUCATIONAL FILMS

A number of magazine articles,* pamphlets, and several books have appeared to represent the growing interest in visual education. Among these are three books of such outstanding importance in the evaluation and treatment of educational films that a somewhat extended account of them is warranted.

The following is the pioneer study in the field, made by a competent psychologist employing scientific safeguards for group experiments and using modern educational tests and computations. It was approved as a thesis for the doctor's degree by Columbia University. His introduction of exact methods in the field of visual education discouraged further publication

* Other experimenters in visual education are Professor J. W. Shepherd of the University of Oklahoma, who made carefully controlled tests as a thesis at the University of Wisconsin; Roy L. Davis, a thesis for a degree at the New York University; Dr. E. Crandall, Director of Visual Instruction, New York City schools; John V. Lacy in Teachers College Record.

Ellis and Thornborough refer also to interesting accounts of methods used in teaching with films by Mr. Rabenort of the New York City schools; Dudley Grant Hays of the Chicago public schools; J. H. Wilson, former Director of Visual Education in Detroit schools; Edwin Y. Montave, of the James G. Blaine Public School, Philadelphia; Miss Terry, of Port Arthur, Texas; Miss Marietta L. Higgins, Hackensack, New Jersey; Eugene E. Nifennecker, Director of Bureau of References, New York City; and H. A. Balcom, Assistant superintendent of Schools, Newark, N. J.

of loosely conducted and uncontrolled "experiments," and of fantastic prophecies by uninformed enthusiasts.

We are fortunate in getting permission from Dr. Weber to use his own summary of this monograph in the Visual Instruction Handbook for 1925, with some additions made especially for this chapter.

I

COMPARATIVE EFFECTIVENESS OF VISUAL AIDS IN SEVENTH GRADE INSTRUCTION

J. J. Weber, Ph.D.

Published by Educational Screen, Inc., 5 S. Wabash Ave., Chicago

In recent years the educational world has heard much of visual instruction; and it is believed by many of its devotees that visual instruction will revolutionize our present teaching technique and bring about a new order of learning. Nothing, however, could be farther from the truth. Visual instruction is not at all new. It is as old as education through visual experience itself; and many of the so-called visual aids—models, charts, graphs and diagrams—are of long standing. But visual instruction has recently been given a powerful impetus by the perfection of photography. Practical photography has created for us various media of manifest instructional value. They are the book illustration, the photograph, the stereograph, the lantern slide, and the motion picture.

Early in 1920 the problem of visual aids had grown

sufficiently important to warrant a serious investigation on the part of some research man in the field of education. Being a graduate student in Teachers College, Columbia University, at that time, and in quest of a degree, I undertook the investigation to provide me with data for the doctor's thesis and, incidentally, to shed more or less light upon a timely problem in professional education. The investigation was mainly in the form of a number of experiments which were conducted in Public School No. 62, Manhattan, New York City.

A PROBLEM IN ECONOMY

The central problem of the investigation was: *Will the use of pictures along with verbal instruction effect economy in the learning process? And, if so, how?* The answers to these problems were found in a series of tests which, from many angles, illuminated the whole subject of visual aids in education. Great care was exercised in the formulation of the tests as well as in the conclusions deduced from the observed facts.

SOME SECONDARY PROBLEMS STATED

But, as the central problem was rather complex, it had to be subdivided conveniently into its major aspects. Accordingly, the following secondary problems were definitely formulated for special investigation:

1. The distribution of primary sense experiences?
2. The effectiveness of informational motion pictures in combination with verbal instruction?
3. The value of a simple drawing in creating a composite visual image?



DR. J. J. WEBER

Author of "Comparative Effectiveness of
Visual Aids"—p. 163



4. The value of a diagram in developing a relatively abstract concept?
5. The comparative effectiveness of four different methods of presentation?
6. The interest-stimulating power of pictures, in comparison with verbal appeal?

A FEW RESERVATIONS

Before taking up the foregoing secondary problems in detail, allow me to make a few reservations:

1. The conclusions after the various experiments hold only for these same experiments as performed under the conditions described!
2. The methods employed in the experiments are necessarily inflexible and, therefore, not practical for actual classroom teaching!
3. The results of this investigation indicate a distinct value for pictures *only as aids*, not as substitutes!

EDUCATION BASED UPON EXPERIENCE

It is an axiomatic truth that all our learning is, in the last analysis, based upon experience. Our common, everyday language, for instance, has grown in number of words and in depth of meaning from countless experiences since infancy. It is also true that various types of experiences have played a rôle in this growth, some more and some less. Illustrations will make it clearer. The word "green" is chiefly the product of visual experiences, while the word "loud" is mainly auditory in origin; "work" is largely the

product of muscle sensations, while "sick" has grown principally from organic feelings; and "pepper" is the combined product, in the order of importance, of taste, smell, sight, hearing and touch.

EMPIRICAL ORIGINS OF WORDS

By means of a questionnaire, which was answered by eighty-one psychologists and experienced educators in tracing back to their empirical origins fifty words from our daily language, I obtained the following results:

Visual experiences contribute forty per cent;
 Auditory experiences, twenty-five per cent; and
 All the others together, thirty-five per cent.

MOTION PICTURES COMBINED WITH VERBAL INSTRUCTION

Three methods were compared: (1) a "lecture" lesson in geography, followed by a short review-quiz; (2) the same lesson, followed by a correlated travelogue film; and (3) the film first, and then the lesson. The experiment was rotated through three experimental units, and approximately 500 7A-grade pupils participated. The comparative effectiveness of the various methods of presentation was measured with a 60-question yes-no test after each experimental unit, and the final results were:

Method I: Lesson-Review	. 45.48 points (100%)
Method II: Lesson-Film	. 49.86 points (110%)
Method III: Film-Lesson	. 52.69 points (116%)

CONCLUSION FROM THE FOREGOING

The results suggest the following inferences:

1. When a correlated film is used as an aid in a seventh-grade geography class it will increase the effectiveness of the lesson decidedly. And any teacher who teaches geography today without the aid of motion pictures is simply "traveling by horse and buggy."

2. The increase in effectiveness is the result of (a) greater ease of comprehension and (b) a higher degree of satisfaction as a consequence. The presentation is more realistic, and, therefore, the children understand it quicker and enjoy it more.

3. Since motion pictures provide what may be called vicarious experience (substitute or make-believe), they should precede the lesson when the subject-matter is relatively foreign to the learner. This should not be taken too literally, however. What is really meant here is that the pictures should come relatively early in the presentation to provide the children with a fund of realistic imagery. That will enable them to interpret the teacher's statements in terms of their recently acquired visual experience. In short, they will know what he is talking about.

4. Summarily stated, the foregoing results establish the value of the motion picture as an aid to, not as a substitute for, verbal instruction.

THE VALUE OF A SIMPLE DRAWING IN CREATING A COMPOSITE VISUAL IMAGE

This experiment is highly suggestive. Four methods were compared; but, for the sake of brevity, the last one has been omitted here. The three were: (1) a description alone of an "imaginary animal"; (2)

a drawing of the animal shown alone; and (3) the drawing and the description presented at the same time. Approximately 250 7A-grade pupils participated. The comparative effectiveness of the various methods of presentation was measured with a free-recall drawing test, and the final summary shows that:

Description alone effected an average score of 40.11 points (100%);

Drawing shown alone, 53.13 points; and

Drawing with description, 55.12 points (137%).

INFERENCES FROM THE ABOVE

1. In developing a composite visual image a pictorial presentation is more effective than a verbal presentation.

2. The increase in learning is characterized by (a) more memories, (b) clearer images, (c) better organization, and (d) less misinterpretation.

3. Verbal description, *when aided by pictorial presentation*, is the most effective method of the three.

4. Perhaps the most powerful double-barreled argument in favor of visual aids is that their use (a) utilizes a native interest and (b) prevents many deplorable misconceptions. The "imaginary animal" experiment has furnished us startling proof.

THE VALUE OF A DIAGRAM IN DEVELOPING ABSTRACT CONCEPTS

Do you know exactly just how an artesian well works? In this experiment, I presented an explana-

tion of the phenomenon in various ways, as:

- (a) verbal description without the aid of a diagram;
- (b) verbal description after showing the diagram;
- (c) verbal description before showing the diagram;
- (d) verbal description while showing the diagram.

In conducting the experiment I discovered, however, that it had been poorly planned. Hence, it was not carried to a point of statistical reliability. I shall not describe it here, partly for this reason and partly for the reason that I repeated the experiment in revised and more elaborate form the following year at the University of Kansas.

EFFECTIVENESS OF DIFFERENT METHODS

In this experiment four exclusive methods were compared: (1) Being taught a lesson orally by the teacher; (2) studying the same lesson from the printed page; (3) viewing the subject-matter of the lesson as depicted on the motion picture screen; and (4) viewing the screen under the guidance of oral comment. The experiment was rotated through four experimental units, and approximately 600 7B-grade pupils participated. The comparative effectiveness of the various methods of presentation was measured with a battery of three tests—a yes-no, a completion, and a drawing test—after each experimental unit, and the final results were:

Being instructed orally . . .	48.62 points (100%)
Studying the printed page . . .	49.22 points (101%)
Viewing the film silently . . .	50.34 points (103%)
Film with oral comment . . .	52.55 points (107%)
The average of the "film with oral comment" pres-	

entation is decisively higher than that of any of the other three methods. Since this agrees with the findings in the previously described experiments, it is safe to assert now that the value of the picture as an aid in verbal instruction stands proved.

RESULTS FROM CONCEALED TESTS

In fifteen chances out of fifteen the results show that the pictorial presentation was invariably at least two per cent more influential than the verbal appeal.

GENERAL CONCLUSION AND OUTLOOK

Nearly five years of continued research in visual instruction have left their influence upon me in the form of a conglomeration of intuitions with respect to the future of visual aids in the schoolroom and some of these intuitions are herewith given forth in a prophecy that may be entertaining if not actually instructive.

The most promising soil for the growth of visual instruction is undoubtedly the elementary school. The most important function of visual aids is that of being a passive source of information, satisfaction, and inspiration in the solution of problems and the execution of pupil projects.

Since visual aids provide vicarious experience, their value increases up to a certain point with lack of experience on the part of the learners. Consequently, the more limited a child's training is, the greater may be the potential effectiveness of the picture or other aid; and similarly, the weaker the child is in native

capacity, the greater is probably the value of objective illustrations.

One caution, however, must be voiced. Viewing a picture does not necessarily effect learning. Seeing is merely a fraction of the learning process. Learning results from thinking, feeling, doing—in brief, from cerebration. So, unless the visual impression is seized upon vigorously by questioning, application, and pupil expression, it will have little or no effect on the pupil's memory or character.

In conclusion, the biggest task in the field of visual instruction now is the actual elaboration of a specific methodology to be incorporated with our established technique of teaching. Every subject in the curriculum and every one of its fundamental elements that can be elucidated with either a visual scene or a visualized scheme, will have to be correlated with one or more visual aids. And every teacher will have to know how to secure, systemize, and utilize most economically the various aids and be an expert in guiding the pupils in their most effective use.

II

VISUAL EDUCATION

A comparative study of motion pictures and other
methods of instruction

Edited by Frank N. Freeman

Thirteen contributors, 391 pages. The University of
Chicago Press, Chicago, Illinois

This most elaborate study yet made of the value of motion pictures in instruction was made possible by a grant from the Commonwealth Fund. The appointment of Dr. Freeman as director of the experiments assured scientific procedure and responsible investigators.

The following experiments are reported:

- I. Comparisons of Different Methods of Visual Instruction, by F. Dean McClusky.
- II. A Comparison of Film and Oral Instruction, by E. H. Reeder and Frank N. Freeman.
- III. The Relative Effectiveness of Six Forms of Lesson Presentation, by Haddon W. James.
- IV. Comparison of Six Modes of Presentation of Subject Matter, by F. D. McClusky and H. Y. McClusky.
- V. The Effectiveness of a Motion Picture Film Consisting Largely of Tables, Maps, and Charts, by Frank N. Freeman, E. H. Reeder, and Jean A. Thomas.
- VI. The Effectiveness of a Motion Picture Used as an Introduction or as a Summary, by A. P. Hollis.
- VII. The Use of a Motion Picture Film to Teach Position and Penholding in Handwriting, by Frank N. Freeman, Lena A. Shaw, and D. E. Walker.
- VIII. Comparison of Motion Pictures, Slides, Stereographs, and Demonstration in Teaching Handwork, by F. D. McClusky and H. Y. McClusky.
- IX. The Effectiveness of the Film and Demonstration in Teaching Physics, by E. C. Rolfe.





Courtesy of Educational Screen

PROFESSOR FRANK N. FREEMAN, UNIVERSITY OF CHICAGO
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- X. The Effectiveness of the Film and Demonstration in Teaching Cooking, by A. P. Hollis.
- XI. Stereographs and Slides in Teaching Oral English to Foreigners, by Nina Joy Beglinger.
- XII. Oral and Film Instruction in Health Education, by Carolyn Hoefer and Edna Keith.
- XIII. Study of the Content of Educational Films, by H. Y. McClusky.

The investigation was undertaken by men and women trained in the statistical methods of the university graduate schools, and represents a balanced set of experiments in which the errors of one would tend to be compensated by the work of the other twelve.

Professor Freeman's report (essentially a summary of his book, *Visual Education*) was made before the Department of Superintendence of the National Educational Association at its Chicago meeting in 1924. The press of the city was almost unanimous in proclaiming it a condemnation of the use of motion pictures in the schools. It was a typical press reaction to anything educational savoring of controversy. In answer to a letter addressed to Professor Freeman at the close of the meeting, he wrote as follows:

"My dear Mr. Hollis:

The report of my talk was, as you probably have guessed, misleading. The quotations themselves were accurate, except the first, but if you will read the report carefully you will see that the descriptive material which was added by the reporter went considerably beyond anything which I said.

Take, for example, the quotation concerning the interest which the pupils have in motion pictures and the headline of this topic. My statement was that the value of motion pictures lies more in

the peculiar content of the experience which they make possible than in their stimulating effect upon the child's interest. I said that the entertainment movie awakens a very strong interest, but that the educational movie does not arouse a corresponding degree. The reporter exaggerated this statement by saying that the child falls asleep. That exaggeration, of course, gives a false impression. The main heading, I suppose, was taken from another statement in which I said the effectiveness of motion pictures has undoubtedly been overestimated in comparison with slides, stereographs, still pictures, and demonstration. That does not give warrant for the statement that educational films are condemned. What I said was that they were not as effective as many people claim them to be, and our results bear that statement out. If as much emphasis had been given to the quotation—"motion pictures have a distinctive part to play; this is the representation of motion in those cases in which it is necessary for the pupils to understand motion,"—as of the somewhat more critical statements, the reader would have been left with a different impression.

Of course, it is very unfortunate that distorted reports of this sort get into the papers. We do not suffer any more than any other class of people from such reports, and I do not believe anything can be done about it. The reporter wishes to make a sensation and in order to do so he selects the aspect of the subject which he thinks will be striking, failing to give the other side or to give the qualifications.

You can at least be assured that the general tenor of the report did not represent the temper of my paper.

Very truly yours,

[Signed] Frank N. Freeman.

This letter was published in full in the *Educational Screen* for February, 1924.

The last paragraph of Professor Freeman's Final Summary and Interpretation, which is presented below, should put at rest any suggestion of antagonism to the educational use of motion pictures. The real

friends of visual education welcomed the report as a timely warning to enthusiasts outside of the educational field against exaggerated claims broadcasted in the press, and also as a constructive contribution to the special service which the motion picture is peculiarly fitted to render to education.

It is evident from the limited number of lessons given in a particular schoolroom or assembly room by a certain teacher using a particular projector and film and subject to certain light and operating conditions, that the conclusions in this report cannot be taken as general conclusions for the methodology of visual education. They are conclusions, or, as Professor Freeman prefers to put it, summaries and interpretations for this particular group of experiments. As data to incorporate with thousands of other similar lessons given under widely differing conditions the series is of great value. It will be several years before a sufficient body of data has accumulated to make "general conclusions" at all tenable.

In support of this view, the author has already pointed out certain circumstances under which "stills" in a motion picture film may be justified, and he has called attention to factors which may make the "teacher talking with the film" a success or failure.

FINAL SUMMARY AND INTERPRETATION

1. *The relative effectiveness of verbal instruction as contrasted with the various forms of concrete experience, represented in visual education, depends on two major conditions, the nature of the instruction to be*

given and the character of the pupils' previous acquaintance with the objects which are dealt with in the instruction.

This major principle is supported, in the first place, by the fact that the relative effectiveness of verbal and visual instruction varies. At Detroit, oral and film instruction were found to be equal in the orange culture and irrigation experiments, while the film surpassed oral instruction in the Egypt experiment. In James's experiments oral instruction proved to be as effective or nearly as effective as motion pictures in the case of certain films, but decidedly inferior in others.

The contrast which is here drawn is between concrete experience on the one hand and the comparing, analyzing, and generalizing operations on the other. The contention is that these latter ways of working over experience and converting raw experience into thought are very much facilitated by language, if they are not, in fact, largely dependent upon it. Certainly communication of general or abstract ideas is very clumsy and difficult without language.

The distinction which is commonly drawn in discussing visual education, is not between sensation and thought, but rather between one sense and another. Vision is contrasted with the other senses, with hearing, which is identified with language, and with touch, taste, smell, etc. In making this distinction, the purpose is to attack language, which is represented by the sense of hearing. Nobody proposes to set up direct experiences with objects through hearing, touch, smell, or taste as competitors with sight for preëminence. The issue is not between the sense of sight and the

other senses. It is between concrete or sensory experience and thought.

These facts of the study suggest that pictures may be useful for presenting some types of subject matter. Doubtless no careful thinker would question this. That pictures have a legitimate function is obvious. So far as words are concerned, the very constitution of many of the educational motion picture films themselves indicate that their authors find it difficult, if not impossible, to present some subjects, or some aspects of subjects, by means of pictures alone. In some cases they resort to verbal discussion and explanation to a very large extent. A striking example of the use of much verbal material, and tabular material of a similar nature, is to be found in the film entitled *Railroads in the United States*. This, however, is by no means an isolated instance. The study of the content of films, made by H. Y. McClusky, indicates that many writers of scenarios for educational films, finding themselves unable to express the ideas they wish to express by pictures, resort to language.

The present study gives no support to a belief that pictures may be substituted for language. It does indicate, however, that they have a definite function to perform. This function is determined by the nature and purpose of the instruction. The purpose of instruction at one time is to lay the foundation for thought, reflection, generalization, application. This foundation consists in direct experience with material objects. At another time the purpose is to build upon this foundation the superstructure of thought. The analogy should not be pressed, since it implies too

much separation in time and space between concrete experience and thought, but it serves to set forth the distinction between getting experience through contact with the material world and the elaboration of that experience.

The evidence is that pictures are an invaluable means of getting certain kinds of experience of a concrete sort. In the detailed reports some light is thrown on the particular kinds of instruction which may be served especially well by pictures. The analysis of the curriculum, in order to determine what can advantageously be taught with the aid of pictures, is, however, only begun. This investigation will have served a purpose if it emphasizes the need of such analysis.

That the character of the pupils' previous experiences is also an important condition which determines whether visual or verbal instruction is the more important is suggested by some of the variations which appear in the results of the experiments. For example, in Hollis's cooking experiment the group which made a high score after oral instruction had previously had five months more instruction in cooking than had the other groups. Their superiority may be due in part to their ability to grasp oral directions because of this previous experience. In James's experiment, oral instruction proved to be relatively effective in the preliminary experiment with the film, *The Queen of the Waves*, and in the latter experiment with the films, *Yellowstone Park* and *Toads*. On the other hand, oral instruction was clearly less effective in the case of the films, *A Woolen Yarn*, *Cuba*, *The Isle of Sugar*, *Lum-*

bering in the North Woods, The Mosquito, Through Life's Window, and Waste Disposal in Cities. The first group of films describes objects or processes which the child can understand or interpret in the light of his past experience. For example, The Queen of the Waves deals with the development of the forms of water conveyance, the log, raft, dugout, canoe, sailboat, steamboat, etc. The children had doubtless either seen all these objects, or at least pictures of them. Yellowstone Park deals with forms of natural scenery, which, again, the children may have seen pictures of or which are sufficiently like objects they have seen to be comprehended by them from a verbal description. Similarly with the film, Toads. The second group, on the other hand, deals with detailed processes, such as those of manufacture, or with more or less intricate or abstruse biological facts, such as the development of the mosquito or the structure of the eye, which the child cannot picture in terms of his previous experience.

This study has only opened up the problem of determining in detail at what points the child's experience with the material world is adequate to serve as the basis of the development of the ideas which we wish to develop, and at what points it needs to be supplemented by further direct experience. Further research is necessary and will be necessary for many years. This further investigation should deal with each subject or division of instruction intensively, and should analyze the curriculum and the method of instruction with reference to this problem from the first grade up.

Our first conclusion deals in general with the rela-

tionship between visual education as a representative of concrete instruction and the more abstract verbal instruction. The larger portion of the investigation was concerned more particularly with a comparison and analysis of the various forms of visual education than with this more general relationship and we now turn to a consideration of this more detailed study. The most frequent comparison which was made was that of the effectiveness of a motion picture film and of some other form of visual instruction.

2. *The comparison of the motion picture film with other visual aids (slides, stereographs, still pictures) as means of informational instruction, indicates that the motion picture is superior within a restricted range of subjects and that outside this range of subjects the older devices are as effective or more effective than motion pictures.*

The most striking case in which the film gave superior results was in McClusky's experiment in which a portion of the steamboat film showing the motion of the steamboat was compared with a still picture of the same object. It is significant that in order to obtain a film for comparison which would be chiefly a picture of motion it was necessary to abstract a portion from one of the existing films. When such a portion was abstracted and isolated for comparison it gave superior results.

James also found the film to be superior to still pictures. In his comparisons, verbal explanation was shown alternately with still pictures just as sub-titles alternate with motion pictures in a film. The verbal explanation used by James was a copy of the sub-titles

of the film. If we take these results alone they seem to indicate that the pictures of objects in motion make a stronger impression or give more information than do still pictures. It happens that in the Cleveland and Chicago experiments the film, *Lumbering in the North Woods*, was also used, and the comparison between the film and slide was made which indicated the film to be superior. But when the same comparison was made with the film, *Iron and Steel*, the slide proved to be fully as effective as did the film. Whether this difference is due to the nature of the subject-matter or to the difference in the merit of the films we cannot say. We can only say that in some cases motion appears to add to the effectiveness of the pictures, while in other cases it does not.

In the application of this conclusion we must take account of the fact that the manner of using still pictures which was observed by James in order to parallel the films as closely as possible is inferior to the usual method of discussion during the viewing of the picture. The comparison which has just been described was made to discover whether motion adds to the effectiveness of pictures which are otherwise alike. The comparisons which are about to be described were made to determine how the motion picture compares with the usual still-picture-oral-comment procedure.

Our comparisons indicate that in most cases the informational motion picture films as now organized are not superior to slide, still picture, or stereograph accompanied by the usual comments. In many cases, particularly in McClusky's experiments, still pictures gave evidence of superior effectiveness. This conclu-

sion runs counter to the opinion of many concerning the effectiveness of motion pictures and requires further analysis and explanation.

It has already been pointed out that there are some facts which can be grasped better by a view of objects in motion than by seeing them at rest. For example, the operation of a machine or the complex of movements which compose an act of skill are probably most clearly apprehended by means of the perception of the motion. But educational motion pictures have by no means confined themselves to such facts. A comparatively small proportion of educational films deal with such content, and those which do contain much material which is not intended to promote the understanding of action.

Motion pictures, then, appear to have two grounds of merit. First, there are some cases in which the understanding of the action of an object requires that it be shown in motion. Second, it may be—though on this point we have less certain evidence—that motion makes objects attractive and as a consequence attracts close attention and prompts to better learning, even though it is not necessary to an understanding of the subject. The first type of advantage is so great as to justify motion pictures in those cases where it is essential to grasp the nature of a movement. The second type of advantage must be weighed in comparison with the advantages of still pictures.

The first advantage of the still picture appears to be that it permits analysis. The picture provides the opportunity for a more active study attitude on the part of the pupil. In the second place, the still pic-

ture gives greater opportunity to the teacher to exert a personal influence and to stimulate the class to active thought. Our experiments give clear evidence on the last-mentioned factor, the influence of the teacher. Its importance is indicated by the advantage of oral comment by the teacher during the showing of a film, by the superiority of demonstration in teaching certain acts of skill and by the superiority of the illustrated lecture to an illustrated text.

Thus far our discussion has dealt chiefly with the use of motion pictures and other visual aids in that type of instruction which aims largely at the acquisition of information by the pupil. A number of experiments were made in subjects in which the information to be gained is of an especially concrete sort, as in a science, or in which the pupil is required to learn to do something instead of merely acquiring information, as in manual arts and to some extent in laboratory science.

3. *In teaching science, demonstration by the teacher is superior to the motion picture.* This is proved to be true in both Hollis's and Rolfe's experiments. In both cases the proficiency of the pupils was measured in whole or in part by their ability to perform or to do something, not merely by their ability to express their knowledge in language. Wherein the superiority of the teacher lies is a matter of speculation, but that it exists is clear. It seems likely that it may be accounted for in part at least by the influence of the teacher's personality in attracting and holding the attention of the pupils and by the fact that the teacher can watch their behavior and vary the presentation by amplifying

the discussion when they do not appear to understand, or passing on when they have the point and are in danger of becoming bored. In our experiments the second factor could operate in only a minor degree since the demonstration was designed to duplicate the film.

4. *In teaching how to do or make something, demonstration, where it can advantageously be carried out, is superior to the film, but the film is superior to all other methods with which it was compared.* The attempt has been made in this statement to combine the results of the handwriting experiment with the results of the mat and box experiments. It will be remembered that in the handwriting experiment the film was compared with the usual verbal instruction and with the procedure of giving the pupils their scores as means of improving the pupils' position. In this experiment, demonstration was not used and it would probably have been difficult to use. The film excelled the ordinary method of teaching.

In the mat and box experiments, besides demonstration and the film, the slide and stereograph were used. The demonstration was superior to both. Taking the two experiments together the film came second in effectiveness, though it was slightly excelled by the stereograph in the box experiment alone. In the mat experiment the slide excelled the stereograph.

5. *Pictures appear to be very effective as devices to help in gaining proficiency in the oral use of a foreign language.* Whether the superiority of the picture group is due to the pictures themselves or to the fact that this group, through the use of the pictures, had

more individual study, is not clear. In any case, the method which involved the use of pictures appears to have been very effective.

6. *It does not appear that motion pictures are of outstanding and unparalleled value as means of awakening interest in a subject, or of stimulating activity, in comparison with advanced modern methods of instruction.* This statement is contrary to a view which is rather widespread among specialists in visual education. The experiment in health education at Joliet was undertaken especially to measure this kind of effect. The chief object of the experiment was not to determine whether the motion pictures increased the pupils' stock of information more than did the parallel methods. Its object was more particularly to determine whether or not they caused the pupils to put into practice more faithfully the rules of health which their information showed to be beneficial. The motion pictures were shown after the topics with which they dealt had already been taught, and took the place of oral reviews. The pupils who were given the oral reviews in place of the pictures, besides making higher scores in the information test, made a greater gain in weight. To offset this, the film group reported in their answers to the questionnaire that they followed instructions somewhat more closely. The evidence is that the non-film group gained at least as much from their instruction as did the film group.

Part of James's experiments also bears on this issue. He measured the stimulating effect of moving pictures by testing the pupils on certain specified follow-up reading. In the original test on the film and the oral

lecture the film groups were very superior, showing that these particular films were much more effective than the particular oral lectures which were compared with them as means of giving information. In the follow-up reading on the same subject, however, only one of the film groups was superior to the oral group, while the other film group was slightly inferior. We may then supplement the foregoing statement as follows.

7. *The peculiar value of the film lies not in its generally stimulating effect, but in its ability to furnish a peculiar type of content of experience.* This conclusion is perhaps indirectly supported, again, by Hollis's comparison of the effectiveness of a film as an introduction to, and as a summary of, a small unit of instruction. The film proved more effective as an introduction than as a summary. Furthermore, it proved to be more effective as an introduction than was an oral introduction. The most probable explanation of these facts, in the light of our other data, is that the film, seen at the beginning, gave a background of experience which illuminated the subsequent lesson.

8. *Each of the common forms of instruction which employ visual aids has some advantage, and there are circumstances under which each is the best form to use.*

The distinctive advantage of motion pictures has already been discussed.

Slides have the advantage of cheapness and convenience in comparison with motion pictures, and when used by a well prepared teacher are very effective.

Maps can be more effectively presented in the form of slides or wall maps than in motion pictures.

Stereographs are particularly valuable when extensive scenes or objects of somewhat intricate construction are to be examined. They gave slightly better results than slides in McClusky's experiments in the field of geography instruction. They are more difficult to use with group discussion than are slides.

The illustrated text is the most convenient and the easiest type of visual material to use and its effectiveness is not greatly inferior to the other types of material. It is particularly useful as a means of rapid and wide distribution of new subject matter, especially among schools which are taught by teachers of limited training.

9. *The usefulness of motion pictures would be enhanced if they were so organized as to confine themselves to their peculiar province.* Their province seems to be the exhibition of moving objects, particularly to facilitate the analysis of motion. They are outside their province when they show still objects or when they enter the field of abstract verbal discussion. They cannot compete, in these respects, with still pictures and with the teacher.

10. *The superior effectiveness of the teacher as contrasted with any merely material device was indicated repeatedly in the investigation.* In spite of the undoubted attractiveness of the motion picture in general, McClusky found the attention of a class under oral instruction to be as high as that of a class which was shown a motion picture. Reading with pictures was found to be inferior to oral lecture with pictures in McClusky's Cleveland experiment. The superiority of demonstration is an evidence that the personal pres-

ence and activity of the teacher is an effective agency. Finally, carefully prepared oral comment by the teacher accompanying a motion picture film, contrary to the almost universal opinion of visual education specialists, adds to its effectiveness.

11. *Music, accompanying a motion picture film, appears to heighten the attention, but whether it increases the amount of information gained from it is not certain.* This question demands further investigation.

12. *There was a smaller percentage of loss on the memory tests in the case of the film groups than of the groups which were given other methods of presentation, with one exception.* The exception was the group which was shown the steamboat film, containing a large percentage of action. This group made a higher initial score than did the slide group with which it was compared. In all the other cases but one, the film groups, in which there was a smaller percentage of loss, made the lower initial scores. When the film group made a lower score than the group with which it was compared in the initial test, it also made a lower score on the final test, in spite of the fact that it suffered less loss. This was true in every individual comparison but one.

A few concluding comments may be made concerning the prevailing character of the present educational motion picture films and the direction in which they should develop in order to be of most service to the school. The discussion deals with informational, not with dramatic films.

It is very evident from the varied proportions of educational motion picture films which are devoted to the representation of moving objects and to other types of material (still objects, charts, tables, verbal discussion) that their distinctive function has not been completely worked out. Many films attempt to do what can be done as well and more conveniently and economically in other ways. To these conclusions may be added several practical suggestions which are based upon the results of the investigation.

13. *Subject matter should not be included in educational films which is not primarily the representation of motion or action.* Such subject matter can be presented fully as well by the various forms of still pictures.

14. *It is uneconomical to put into motion pictures actions which can be readily demonstrated by the teacher.* In one educational film commensurate quantities are illustrated by showing the picture of a hand pouring water from a gill measure into a pint measure. It would be far better for the teacher to perform this simple act before the class and explain its significance during the performance.

15. *Motion pictures should be so designed as to furnish to the teacher otherwise inaccessible raw material of instruction, but should leave the organization of the complete teaching unit largely to the teacher.* The explanation, discussion, or elaboration of the material which is shown in the film is a function of language. Language can be used fully as effectively if not more effectively by the teacher as by the film.

Furthermore, the class should take a large share in the discussion. The reduction of the motion picture to its essential core will promote both economy and flexibility.

16. *It is probably desirable to have motion picture films in small units.* The long thousand-foot units either present too much material at once, include subject matter not suitable for the motion picture, or they take over the rightful function of the teacher. If smaller units are available the teacher may choose just the picture which is needed to lay the foundation for or to illustrate a particular part of the discussion.

17. *Care should be taken to encourage initiative and an intellectually active attitude, and not to allow the use of motion pictures or other visual methods to over-develop the attitude of passive receptivity.* The objection is sometimes made to the use of motion pictures that they will make education too easy. This objection misses the real point. If the pupil actually gets the training we wish him to secure it is no objection that he gets it easily. The real objection is that he never really completes his mastery of a subject merely from having it presented to him. He should make it a working part of his mental machinery. To provide for this we must encourage discussion, independent reading, problem and project work, and the like.

It is the opinion of the authors of this investigation that educational motion pictures have a definite and important function in education. It has been the purpose of the investigation to contribute to the definition of that function and by this means to promote their usefulness.

III

THE CINEMA IN EDUCATION

A report of the Psychological Investigation conducted by Special subcommittees appointed by the Cinema Commission of Enquiry, established by the National Council.

Edited by Sir James Marchant, 159 pp. George Allen & Unwin, Ltd., London.

The report is edited by Sir James Marchant, general secretary of the National Council. Part I, giving an account of experiments with educational films, is signed by Professor Charles Spearman, chairman of the subcommittee on psychological research, Professor Cyril Burt, secretary, and S. J. F. Philpott, M.C., B.Sc., investigator, and conductor of the experiments. Part II is a description of the various types of motion picture projectors suitable for school use.

The report makes acknowledgment to the Carnegie Trust and National Council and to other sources for \$5,000 and more, granted for the experiments. The experiments were conducted by Mr. Philpott in the psychological class room at University College, London.

Two classes of boys, 23 in all, and five classes of girls, 75 in all, were used. The groups were stated to be "approximately equal in ability," but no grades nor ages are given and no intelligence tests were used. It seems also that the committee was unaware of the experiments of Weber and Freeman in the United States, as they speak of their own experiments as being

“for the first time a scientific investigation into the psychological conditions and possibilities for using the cinematograph for educational purposes.”

The small number of children used in this experiment contrasts with those of Weber and Freeman, the former using 476 and the latter several thousand. The larger groups of both children and teachers in the American experiments give opportunity for the accidental factors to check out, with a consequent greater validity to the conclusions.

Aside from these drawbacks, the experiment was conducted with great thoroughness and the results analyzed from many angles.

The tests were confined entirely to “essays” written by the children after they had seen the films. The more recently developed educational tests of the American experiments are absent here.

The parallel series of lessons compared consisted of:

- (1) Film alone
- (2) Slides alone *
- (3) Film with comment
- (4) Slides with comment
- (5) Purely oral lesson

The films used were given as follows:

TABLE I

<i>Lesson No.</i>	<i>Title</i>	<i>Minutes.</i>
1.	“The Stickleback” (Pathé Freres)	4½
2.	“The Caddis” (Educational Films)	6

* Slides consisted of pictures and sub-titles copied directly from the film and were run at the rate of about 5 per minute.

3. "The Volcano" I. The whole film being divided for purpose of the experiments in two parts (Educational Films)	7
4. "The Volcano" II	8
5. "Solving Canada's Fuel Problem" (Jury's)	16
6. "Salmon Fishing" (Jury's)	15
7. "The Enemy of the Forest" (Jury's)	17

The various film, slide and oral lessons were alternated among the groups until each group had received a lesson in the five different forms.

In marking the essays which the children used as tests, the investigator compiled a Register of Facts, that is, separate statements of all the unitary facts mentioned in the essays. These statements of fact were classified into categories of (1) Action, (2) Living Things, (3) Inanimate Objects, (4) Locality.

The essay material was again analyzed into (1) References to the Pictures, and (2) References to the Sub-titles. Each of the sub-divisions was again subdivided into (a) Direct Reports and (b) Interpretations.

With the exclusive reliance placed by the committee on childrens' essays as test material, the investigation became as much a study of the essay form as of films and slides. In fact, some thirty pages are designated as Rules for Essay Building.

We are not told exactly on what the marks were based, but the tables and discussions show that the text essentially resolved itself into the acceptance of particular and general modes of expression, as standing for verbal and pictorial representations respectively. The relative amount of particular statements seems to have been the principal basis of rating.

The study of words and sentences in essays as accurate bases of report of film and slide lessons constitutes a valuable part of the report, probably the most valuable, from the standpoint of one familiar with the more elaborate American experiments in film pedagogy.

Table VI., page 83, probably illustrates the type of work done, as effectively as any in the book.

TABLE VI

Showing the Analysis of Marks into those for Variable and Common Elements respectively. (No note is taken of mode of expression.)

	COMMON ELEMENTS			VARIABLE ELEMENTS		
	Picture					
	Sub- titles	Material Other	Sum of Common than that under D	Element Marks	"Action" mate	"Inani- per per Essay
					Marks	% Gain
Girls' Results	A	B	C	D	E	
Film alone	18}	26}	44}	55}	67%	99
Slides alone	22}	24}	46}	33}		79
Film talk	32}	27}	60}	62}		122
Slides talk	33}	27}	60}	50}		110
Oral	43	16		41		100
Boys' Results (immediate memory)						
Film alone	53}	15}	68}	32}	68%	100
Slides alone	53}	13}	66}	19}		85
Boys' Results (delayed memory)						
Film alone	50}	21}	71}	28}		100
Slides alone	48}	18}	66}	22}		87

The author, in part, summarizes the results as follows:

(a) Mode of Expression—It has been shown that film essays are much more given to reports in particular terms than are any of the other essays.

(b) Common Elements—As a result of similarities between the lessons, essays tended to be full of common elements.

(c) Variable Elements—The more the film dominates the situation, the greater the tendency to describe the pictures themselves, and that in Particular terms.

As far as individual categories are concerned the most striking differences are found under the heading of Action. Gains to cinema essays here run into hundreds of per cent. Figures for both boys and girls confirm this result.

The next most important category is that of Inanimate Objects—machines, fishing-nets, etc. Film essays gain here, probably because seeing things in motion explains their use, or, in any case, brings them into a prominence they would not otherwise enjoy.

(d) Effect of a Commentary—Although attempts were made to keep the commentaries on a purely descriptive basis, the intervention of the teacher only resulted in the addition of general statements to the essays as far as the film alone and film talk were concerned.

The author has one chapter on Rote Memory and Intelligence, in which he discusses a phase of reports of visual impressions which has not received much

emphasis heretofore. The lack of words to express the ideas received from pictures and the suggestiveness of oral lessons in the way of supplying words are factors that need to be taken into serious consideration when using verbal responses, especially in essay form, as test material for visual impressions.

Says the author: "We get the difficulty of words as a vehicle of thought. There are 'awarenesses' and 'words' or symbols of those awarenesses, and translation from one to the other is no easy process. Film children obtained a mass of awarenesses from their lessons, and they had to put them into words. The oral lesson children, on the other hand, were supplied with words which they had to understand for their own edification and to memorize for essay writing purposes."

"It is in this last respect that we meet with the problem in the essays. *The fitting of words to an experience is by no means the same thing as remembering someone else's description of it*, and the film essays probably suffered considerably because of the child's inability to express himself."

The psychological analysis of the relation of the words used by young children to a much larger quantity of ideas which they receive is quite penetrating, and an important by-product of the report.

CHAPTER VIII

A SCORE CARD FOR JUDGING VALUES OF INFORMATIONAL PICTURES

I. Introductory Statement

A considerable body of literature exists which has for its purpose the evaluation of pictures which are works of art. There are many books that describe the paintings of great artists, and such art criticism has developed various philosophical statements of the canons of art as applied to paintings. Students of art are given textbooks that guide them in the appreciation of works of art. No such study has been made of the purely informational picture, where the purpose of the picture is to convey information of a definite type rather than to appeal to the sense of beauty or other related emotion.

Pictures are now used so largely to supplement textbooks, manuals of instruction, magazine and newspaper articles, that we regard them as necessary adjuncts to practically all forms of instruction permitting of an appeal to the eye. These pictures include press prints, photographic prints designed for direct observation, or they may be lantern slides and moving picture prints designed to act as material for projection upon a screen. The educational moving picture introduces the new element of motion with a consequent spurring of attention due to the speed at which the movement is shown. But should the picture be

“frozen” at any point into a “still,” it subjects itself to the criteria used in this study of still pictures. Stereoscopic pictures require projection of a different type. Diagrams, sectional drawings, blue prints, etc., form a special kind of picture, in which the artist secures attention to certain features of an object or group by omitting certain aspects of the picture and emphasizing others. They are not representative pictures since they do not portray an exact representation of the object as it appears.

This wide variety of pictures for instructional purposes has occupied the field of instruction so universally, and yet so quietly, that they have been taken for granted since Comenius’ time, and seemed to have received a relatively small amount of study from educators.

The writings of pedagogs contain frequent references to the use of *good* pictures, and young teachers are urged to make use of *good* pictures at suitable points in instruction, but they are not told what good pictures are. If educators are shown a collection of informational pictures from which a selection for teaching purposes is to be made, they pick out as a rule pictures (1) that pertain to the subject in a general way, and (2) that are clearly printed. Very often another quality unconsciously dominates the selection, namely, (3) the artistic quality, sometimes to the detriment of the first two more important elements. These do not constitute analytic principles of selection.

Of late, scales for the evaluation of children’s drawings have received some serious study in America and a very good beginning has been made in reaching some

understanding of the values to be scored in this type of picture.

In reviewing this literature, the conviction grew upon the writer that a similar study should be made of the much wider field of informational pictures used as aids in teaching children the various subjects of study, such as geography, botany, zoölogy and geology, though without the numerical weights attached to scale points.

II. Construction of a Tentative Score Card

It seemed logical to begin the inquiry by finding out the existing practice among representative educators who were making a large use of pictures from the informational point of view, for instructional purposes. Accordingly, the practice and views of the following educators were made the subject of inquiry:

A. W. Abrams, director of visual instruction, New York State Department of Education.

W. W. Atwood, President of Clark University. Formerly professor of geography, Clark University, producer of a series of Motion Picture Films in Geography.

Edith Parker, instructor in the teaching of geography, University of Chicago.

C. H. Hanson, Visual Instruction Service, U. S. Department of Agriculture.

Dudley Grant Hays, director of the department of visual instruction of the Chicago school system and formerly president of the National Academy of Visual Instruction.

Dr. Gilbert Grosvenor, editor of the *National Geographic Magazine*.

TABLE I.
JUDGING INFORMATIONAL PICTURES
COMPARATIVE SCORE CARDS

A. W. Abrams (Terms borrowed from Literature)	Miss E. P. Parker (from Geography standpoint)	W. W. Atwood (from Geography standpoint)	C. H. Hanson Visual Instruction Service, U. S. Department of Agriculture
Authenticity.	Legibility.	Authenticity.	Correct representation.
Truth.	Geographic quality.	Truth. Characteristic or typical view.	Typical view.
Expressiveness.	Geographic Importance.	Dramatic Interest. Life of people. Human contact. Festivities. Recreation. Industries.	
Quality.		Quality.	Quality. Sharp definition. Even gradation. Freedom from blemishes.
Attractiveness.		Naturalness—no posing.	Good composition. Simple and appropriate background. Correct distribution of light and shade. Good arrangement. Unity
		Mental stimulus Thought-provoking. Problem-raising.	

TABLE I.—*Continued.*

JUDGING INFORMATIONAL PICTURES

COMPARATIVE SCORE CARDS

Dudley Grant Hays	National Geographic Society (Popular Geography)	Morton Bassett McIntosh Ster- eopticon Co.	J. P. Goode (Geography)
Truth.	Truth. Typical character.	Truth.	Truth.
Expressiveness.	Action. "Doing some usual thing in a fashion peculiar to him and to his land."		Geographic importance.
Quality.	Clear definition.	Quality.	Quality.
Attractiveness.	Beauty and charm in composition. "One that catches the eye and then delivers a message of world geogra- phy."	Composition.	
Relevancy. Is the view significant for the topic?	Geographic Interest.	Pedagogic value. Vividness. Importance of the idea to be put over.	

Professor J. P. Goode, professor of geography, University of Chicago.

Morton Bassett, formerly head of the McIntosh Stereopticon Co., Chicago.

This list is of course far from being exhaustive, but it is at least representative of competent users and critics of informational pictures. Messrs. Hays, Goode, Bassett, and Miss Parker were interviewed personally, while Mr. Abrams, President Atwood, and Mr. Hanson responded with full and helpful letters. The chief of school service of the National Geographic Society sent Mr. Grosvenor's printed directions to his photographers and full descriptions of the society's work with pictures issued in sets for school use. Stripping these various accounts of their descriptive matter down to the bare points enumerated, the following lists of points were tabulated for purposes of comparison.

Table II combines the separate qualities mentioned in all the lists into one composite list of qualities, without the repetition of any quality. The points were grouped around five main ones.

TABLE II

COMPOSITE SCORE CARD

Total Points of Eight Authorities Consulted

1. Authenticity.
Reliable Source.
2. Truth.
Faithfulness to the facts.
3. Quality.
Sharp definition.

Even gradation of light and shade.

Freedom from blemishes.

4. Attractiveness.

Naturalness—freedom from posing.

Good composition.

Balance.

Unity.

Color harmony.

Beauty—undefined.

5. Pedagogic values.

Expressiveness—legibility—vividness.

Importance of topic illustrated—relevancy.

Type Character.

Stimulation of thought—raising and answering problems.

Power to tell one story.

Action—dramatic interest.

In geography, where human contact with nature is concerned.

Festivities, industries.

By a slight change in the grouping and the use of the subsidiary points as defining and descriptive phrases it was possible to condense these points to six, which gave a more practical number to deal with under the conditions of the experiment. This condensed score card is shown in Table III.

TABLE III

SUGGESTIVE SCORE CARD FOR JUDGING VALUE OF INFORMATIONAL PICTURES FOR TEACHING PURPOSES

1. *Truth and Authenticity.*

Facts shown must be accurate, without distortion or illusion—and the source of the picture must be reliable.

2. *Relevancy.*

Importance of the picture for the topic illustrated.

3. *Concentration.*

Does picture direct attention to the significant facts, or are they obscured by unimportant details?

4. *Power to Provoke Thought.*

Does the picture raise—answer, questions?

5. *Technical Quality.*

Clear definition; good distribution of light and shade; freedom from blemish.

6. *Artistic Quality.*

Unobtrusiveness. If strikingly artistic, picture diverts attention from specific informational value; if noticeably inartistic, same result follows.

III. Testing the Score Card

The score card having been reduced to workable proportions, the next problem was to put it to the test of use so as to develop its weaknesses and strength. These would come into relief only by practice in applying the tentative score card to the judgment of informational pictures used in teaching. Through the coöperation of members of the faculty of the University of Chicago, several classes consisting mostly of graduate students, experienced teachers and administrators, were permitted to act as judges of a group of informational pictures, using the new score card as a guide. One class below graduate grade was included

in the list of judges to get the benefit of certain technical knowledge appropriate to some of the pictures. This was Professor Bretz' freshman class in elementary geology. Another technical group was Professor Lemon's class in photographic processes, which gave an unusual opportunity to get competent judgment on technical quality.

The technical procedure and statistical data involved in the conduct of the experiment are out of place here, but the result can be briefly stated, as follows:

1. The ranks assigned and the points on the tentative score card were sustained by all the judges by percentages varying from $55\frac{1}{3}$ to 75.

2. Criticisms of the score points by the judges suggested a reduction from 6 to 4 main points for ordinary use, when the question of time is a vital one.

Condensed Score Card

The Score Card which finally emerged from the test was as follows :

1. Truth and Authenticity.

Are the facts true, or well vouched for?

2. Relevancy.

Does the picture illustrate the particular topic under discussion?

3. Concentration.

Does picture direct attention to the significant facts, or are they obscured by unimportant details?

4. Technical Qaulity.

Clear definition (focus); good distribution of light and shade, freedom from blemish.

Below is an interesting example of a score card for Films, devised recently by Dr. J. J. Weber of the University of Texas.

SCORE CARD FOR EVALUATING EDUCATIONAL FILMS

General Standard: Does the moving picture, in a satisfying and economical manner, effect learning that is worthwhile?

More in detail—

Rating

- | | |
|---|-----------------|
| 1. Does the picture effect specific learning? Produce useful changes in the observer's intelligence? Picture memories? Facts, ideas, concepts, inferences, generalizations, suggestions for improving skills, insights, ideals, and ambitions? This intellectual growth should consist mainly of concepts involving behavior, movement, or perceptible change—dynamic ideas, in brief. Does the picture embody the truth in all essentials? And, if fiction, is it free from objectionable error? | (.....) |
| | TRUTH |
| 2. Does the picture create a problem in the observer? And does it solve it decisively? Conform to the principles of unity, coherence, and emphasis? Main problem—vital, gripping, interesting, whetting curiosity, stirring emotions, etc. Subordinate problems—complicating, relevant to and building up the main problem? Solution—satisfaction in the solution of the main problem? Effective word-picture balance? | (.....) |
| | PROBLEM |
| 3. Does the picture appeal to socially approved native interests? And utilize the laws of attention? Elements involved: personification, human beings, animals, young things; mysterious, novel, familiar, and sensational behavior; hero worship, struggle and success, etc. Things that attract attention readily; animation. However, little or no appeal to anti-social instincts. | (.....) |
| | FEELINGS |
| 4. Is the picture good from a mechanical standpoint? Photography of superior quality? Arrangements and selection of scene elements effective? Captions brief, clever, correct, unobtrusive, thought stimulating? Manifest approach toward artistic perfection? | (.....) |
| | BEAUTY |
| 5. Any other standard?..... | |

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DIRECTIONS FOR USING THE SCORE CARD: Evaluate the picture for each standard in accordance with the following:

Excellent	E or 85
Good	G or 70
Fair	F or 50
Poor	P or 30
Unsatisfactory	U or 15

Then average your separate judgments into single rating (.....)

On the reverse of the Weber Score Card are spaces for recording film title, number of reels, condition of reel, producer, distributor, synopsis—and the questions: Film related to what school subjects? Adapted to what pupil age? Previous review? By whom? Where? Rating? Date and name of reviewer.

CHAPTER IX

STATE AND CITY CENTERS OF DISTRIBUTION OF EDUCATIONAL FILMS

The most recent published study of the film situation in city school systems and state universities is contained in the author's bulletin, No. 8, published in 1924 by the U. S. Bureau of Education. The tables are too long and detailed for reproduction here, but the summaries of the findings may be useful to school officers contemplating visual education departments.

The bulletin is divided into two parts; Part I deals with the professional status of visual education officers in (a) state institutions, and (b) in city school systems. Twenty state departments of visual education, mostly in state universities, were found to have had the work sufficiently well organized, with special directors of visual education, budgets, etc., to warrant inclusion in the study, and a presentation and analysis of the data connected with their distribution of visual aids. These twenty were:

University of Arkansas
University of Colorado
Indiana University
University of Oklahoma
Kansas State Normal School

University of California
University of Florida
Iowa State College
University of Oregon
Massachusetts State Department
of Education

Philadelphia Commercial Museum	Texas Agricultural and Mechanical College
University of Texas	University of Utah
University of Wisconsin	
Mississippi Agricultural and Mechanical College	University of Minnesota
	University of Missouri
North Dakota Agricultural College	University of New York

Visual education departments are located usually in the extension departments of the universities, though they are occasionally found elsewhere, depending on the position of the individual who started the work. The directors were found to be well qualified, with the master's degree as the average qualification and an average salary of \$2,500. Fifteen of these university departments offered credit courses in visual instruction to university students. Four of them reported supervising the production of films on their own campuses.

Fourteen cities considered in Part I were found to qualify for the purposes of the study. These were:

Atlanta, Ga.	Kansas City, Mo.
Berkeley, Calif.	Los Angeles, Calif.
Buffalo, N. Y.	Newark, N. J.
Chicago, Ill.	New York, N. Y.
Cleveland, Ohio.	Pittsburgh, Pa.
Detroit, Mich.	San Francisco, Calif.
Indianapolis, Ind.	St. Louis, Mo.

Their budgets and salaries were found to be much larger than in the universities, and the visual aids distributed richer in variety and content. Museum exhibits were chiefly responsible for this.

New York has the outstanding department with a total budget of \$31,600. Chicago is next, with \$25,500; Los Angeles is the third, with \$23,700, less salary, which is not reported; and San Francisco is fourth, with \$23,000. Detroit is a close fifth, with \$22,000. New York's contractual system is unique among the cities. One firm is given the contract for assembling the films from the different exchanges, distributing them to the schools on schedule, and furnishing operators when needed. The director thus relieves himself at one stroke of a complicated job. He reports that the system has worked admirably so far.

Of greater interest to film users is Part II, which deals with the evaluation and distribution of visual aids in state and city institutions. The twenty state universities have large and important lists of films for state-wide distribution to the schools, churches and clubs of the state. They are purchasing films in increasing numbers for this purpose, but nearly all of them are film depositories both for free films and rental films. The free films are largely from government sources and the larger manufacturers of the country and, barring transportation charges, are sent out free or for a small handling fee. The rental rates for films deposited by commercial exchanges are fixed by them, and the university is given a commission on rentals. The chief sources mentioned were:

George Kleine, New York City.

U. S. Government, Washington, D. C.

Ford Motor Co., Detroit, Mich.

Bureau Commercial Economics, Washington, D. C.

Commercial exchanges in general, like Pathé Exchange, Inc., etc.

The films reported by the university departments as being of highest educational values were:

Institutions		Institutions	
1. Julius Cæsar *	6	16. Four Seasons	1
2. Milk Nature's Perfect Food	2	17. History of Telephone	1
3. Priceless Gift of Health	2	18. Making Telephone History	1
4. Revelations	2	19. Making the Desert Blossom	1
5. Silas Marner	2	20. Mechanics of Solids and Liquids	1
6. Animal Studies and Magnetism	1	21. Milk as Food	1
7. Auto Starting and Lighting	1	22. The Milky Way	1
8. A Woolen Yarn	1	23. The Orange Judd Films	1
9. Back of the Button	1	24. Out of the Shadows	1
10. The Benefactor	1	25. Pompeii	1
11. Come Clean	1	26. Romance of Glass	1
12. Deliverance	1	27. Selecting a Laying Hen	1
13. Diary of a Murderer	1	28. Story of a Mountain Glacier	1
14. Embryology of the Egg	1	29. Story of a Stick	1
15. Exit Ascaris	1		

The distribution proceeds both by the individual call system and by the circuit system, with the call system preferred.

Very little correlation of films with courses of study was reported; most of the films distributed were of the general-educational, or entertainment-educational variety. The strictly instructional, text or classroom film had not yet become a regular feature of the schools.

* Exchanges where these films may be secured are listed in Part II.

With regard to the proportion of expenditures among films, slides, stereographs, and exhibits, Los Angeles led the cities, with an expenditure of \$9,193 for film rentals and \$15,000 for film production. New York is next, with an expenditure of \$10,000 for film rentals. Detroit spends \$6,000 and Newark \$4,600. In the large cities where commercial exchanges abound, the film budget is spent for rentals, while in the universities, as we have seen, it is spent in film purchases.

Of thirteen cities reporting on the point, nine give courses in visual instruction. In seven it is a formal matter, and in two informal or individual. The formal courses are from six weeks to one year in length. This development of new courses has taken place to about the same degree in the state institutions. It indicates that visual instruction has entered educational circles at a high level of scholarship and technical development.

Newark, Atlanta, Detroit, New York, San Francisco, and St. Louis all report important modifications of state regulations which permit the use of portables in the schools; and those visual instruction centers having trouble in this regard would do well to write the visual instruction heads of these cities. As pointed out under this head in discussing state institution departments this whole matter of trouble due to state regulations is liable to disappear in the very near future owing to the growing practice of non-theatrical distributing agencies handling only non-inflammable film.

Of the fourteen cities, eleven reported on their chief sources of film. In contrast to the institutions, nine



SCENE FROM "YELLOWSTONE NATIONAL PARK"—
p. 45

of the eleven mention local exchanges as chief sources. Only three mention state universities, and only one the United States Government. Six out of ten have produced film, a growing practice in both cities and state institutions.

Blue-Ribbon List of Films For Cities

In response to the question asking for films of highest educational value, the following were mentioned:

Toads, and Making of a Mountain Glacier,* produced by the Society of Visual Education.	The Romance of the Hardwoods.
Iron and Steel, Milk as Food, and Luther Burbank, produced by Ford.	Bre'r Rabbit.
Revelations, and The Lumber Industry, produced by General Electric.	Apple Blossom Time in Normandy.
How Life Begins.	Yellowstone National Park.
Nanook of the North.	The Sugar Trail.
Hats Off.	The Human Voice.
Life of Lincoln.	From Tree to Tribune.
Making of a Citizen.	Beyond the Microscope.
My Own United States.	Park's Physical Geography.
The Priceless Gift of Health.	Circulation of the Blood.
	The Coal Industry.
	Mexico and Oil.
	The Land of Opportunity.
	The Four Seasons.

If this list is compared with a similar list from the state institutions, it will appear that seven of them are mentioned by both groups. Considering that the cities deal so largely with local exchanges, it is interesting to note that they include theatrical films in their lists as seldom as do the state institutions. The George

* Exchanges from which these films may be secured are listed in Part II.

Kleine films, so prominent in the institutional list, do not appear at all in the city lists. This was obviously a matter of lack of opportunity or attention, as Mr. Kleine preferred to distribute his films through the university centers. Thus many of those mentioned in both lists reflect the accidents of opportunity more than they do deliberate choice from the whole field. Fully a third of the films in the institutional list show their service to agricultural communities, while the city list mentions only one film of agricultural appeal.

The circuit system of distribution is in even less favor with the cities than with the institutions, and all cities report correlation of visual aids with courses of study. The favorite subjects for correlation seem to be geography and nature study, though half of the cities report some correlations in all subjects.

The recent rapid growth in the educational film situation is well illustrated by the lists of films just quoted. Only two years have passed since these lists were printed, and yet so many superior educational films have appeared since then, that only a small number of these "blue ribbon films" were selected for the three film libraries assembled in this book. Of the twenty-nine in the university list, five were selected for the libraries; and of the twenty-eight in the city list, eleven appear in the libraries of Chapter II.

Additional Universities, etc., Maintaining a Distribution of Visual Aids

In addition to the state institutions and cities mentioned in the bulletin just reviewed as maintaining

an organized form of distribution of visual aids, the following are listed in A Visual Education Directory by J. V. Ankeney, secretary of the National Academy of Visual Instruction:

Bureau of Visual Instruction,
University of Alabama,
Tuscaloosa, Ala.

Alabama Polytechnical Institution,
Auburn, Ala.

Extension Department,
University of Arizona,
Tucson, Ariz.

Extension Department,
State College of Agriculture,
Athens, Ga.

Extension Department,
University of Kansas,
Lawrence, Kan.

Film Service, Extension Department,
State Agricultural College,
Manhattan, Kan.

Extension Department,
State Normal School,
Natchitoches, La.

Extension Department,
University of Michigan,
Ann Arbor, Michigan.

Department of Agricultural Education,
University of Missouri,
Columbia, Mo.

Director Public Service,
University of Montana,
Missoula, Mont.

Extension Department,
University of Nevada,
Reno, Nev.

Director of Conservation,
University of Nebraska,
Lincoln, Neb.

Department of Visual Instruction,
State Museum,
Trenton, N. J.

Director Community Service,
State Department of Education,
Raleigh, N. C.

Department Agricultural Education,
North Carolina State College,
Raleigh, N. C.

Extension Department,
Ohio State University,
Columbus, O.

Extension Department,
State College,
Kingston, R. I.

Extension Department,
University of Tennessee,
Knoxville, Tenn.

Extension Department,
Washington State College,
Pullman, Washington.

Extension Department,
University of Wyoming,
Laramie, Wyoming.

Additional Cities Maintaining a Distribution of Visual Aids: *

Akron, O.	Rockford, Ill.
Burlington, Vt.	Sacramento, Calif.
Canton, O.	Saginaw, Mich.
Cheyenne, Wyo.	San Diego, Calif.
Dallas, Tex.	Sioux City, Iowa.
Dayton, O.	Somerville, Mass.
Fort Wayne, Ind.	Spokane, Wash.
Jersey City, N. J.	Springfield, Mass.
Manchester, N. H.	Springfield, Ohio.
Meriden, Conn.	St. Paul, Minn.
Moline, Ill.	Syracuse, N. Y.
Muskogee, Okla.	Terre Haute, Ind.
Newport News, Va.	Trenton, N. J.
Norfolk, Va.	Utica, N. Y.
Omaha, Neb.	Washington, D. C.
Paterson, N. J.	West Allis, Wis.
Portland, Ore.	Wilmington, N. C.
Providence, R. I.	Winston-Salem, N. C.

The Visual Education Directory cited above lists museums distributing visual aid:

BUFFALO—

Carlos Cummings,
Buffalo Society of Natural Sciences,
Buffalo, N. Y.

CHICAGO—

D. C. Davies, Director,
Field Museum,
Chicago, Ill.

* Listed for the most part by F. Dean McClusky in the National Educational Association's committee report, 1924.

CLEVELAND—

William M. Gregory, Director,
Educational Museum,
School of Education,
Cleveland, O.

GRAND RAPIDS—

H. L. Ward, Scientific Museum,
Grand Rapids, Michigan.

MILWAUKEE—

S. A. Barrett, Curator,
Milwaukee Museum,
Milwaukee, Wis.

NEW YORK—

Grace E. Fisher, Slide Librarian,
American Museum Natural History,
New York City, N. Y.

PHILADELPHIA—

Charles R. Toothaker, Curator,
Commercial Museum,
Philadelphia, Pa.

ST. LOUIS—

C. G. Rathman, Asst. Supt. of Schools,
Educational Museum,
St. Louis, Mo.
Miss Amelia Meisner, Curator,
Educational Museum,
St. Louis, Mo.

These educational institutions and cities have purchased many of the films listed in this book for distribution to the schools, churches, etc., of their particular state or vicinity. Many of them are free or

nearly so, within the particular state or city, and for some a reasonable rental is charged. Many Ford and Burton Holmes reels will be found in the collections of the universities. The United States Government, theatrical and non-theatrical exchanges, and many welfare agencies have deposited groups of films with the state universities or other state departments at fixed rental rates, but at a saving in transportation charges and in time of delivery to patrons.

George Kleine, the United States Department of Agriculture and Bureau of Mines, the Canadian Motion Picture Bureau, the General Electric Co., and the International Harvester Company and many others, have their films on such a deposit arrangement at the universities, and in the larger city school systems mentioned previously in this chapter. If your city schools do not maintain a distribution of visual aids, write your state university, agricultural college, state normal school, or state department of education before writing the exchanges or firms themselves. Then if you cannot secure service, write the firms whose addresses are given after the films.

CHAPTER X

THE FUTURE OF EDUCATIONAL FILMS

Film Presents New Problem to Schools

The film presents an inherently new product to the schools. There are no precedents to follow in dealing with it. Educators do not produce their own apparatus, blackboards, lanterns, scientific instruments, not even textbooks. Educators furnish the ideas, but rely upon the industrial firms to work them up and market them. However, in the film situation a peculiar condition exists. The big producers, who alone have the technical equipment and capital necessary for quality film production have shown no inclination to produce purely educational films. They have not been convinced that the school market could absorb the product in sufficient volume to warrant the deflection of their time and resources from the more lucrative theater field. Moreover, the theater managers have a latent fear that the schools and churches will encroach on their territory. The producers have no wish to offend the theater managers, their best customers, and so they are not interested in the school field.

But schoolmen and churchmen everywhere have sensed the educational value of the movies, and as they see the remarkable effects of moving pictures on the



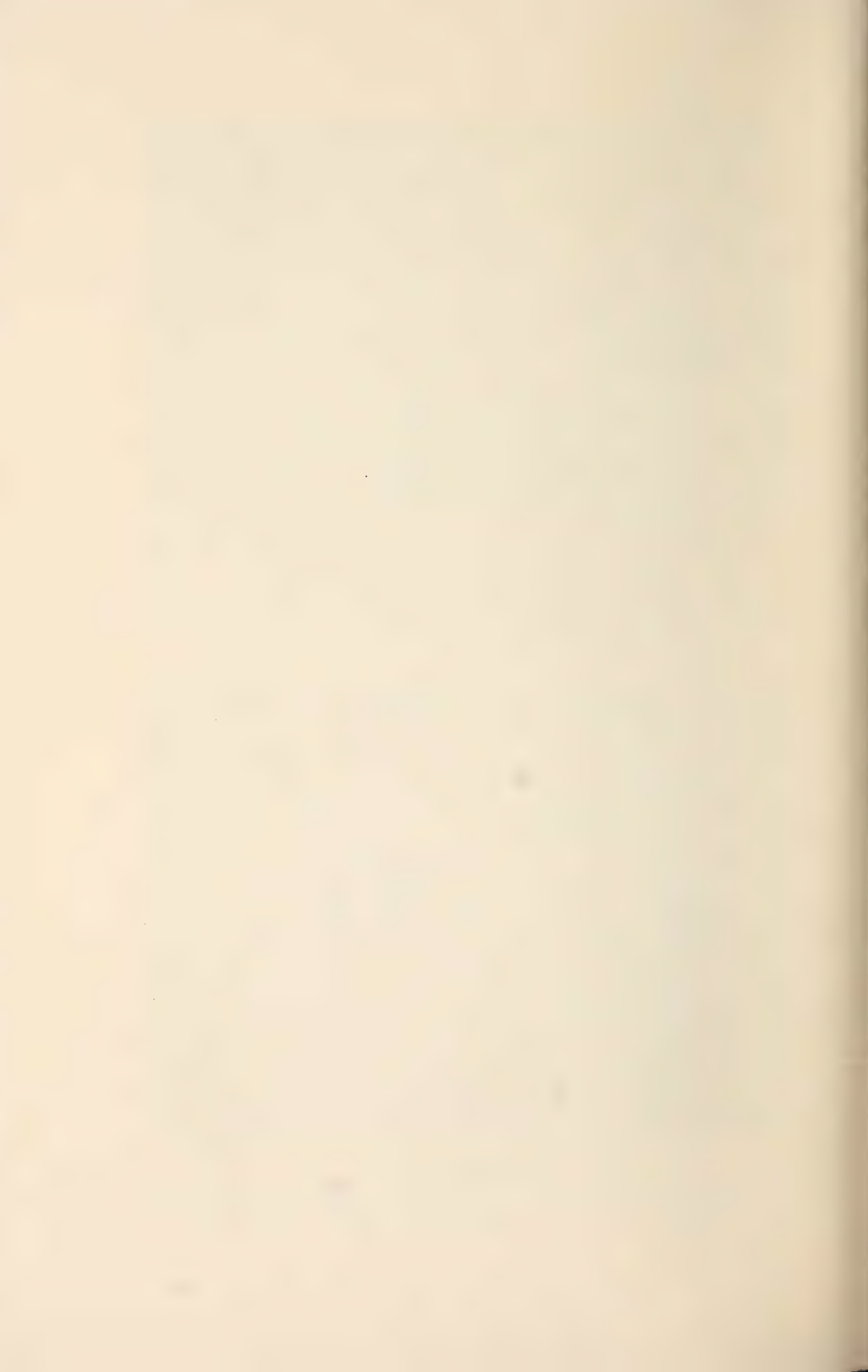
CHARTER MEMBERS NATIONAL ACADEMY OF VISUAL INSTRUCTION, AT
UNIVERSITY OF WISCONSIN, JULY, 1920

W. H. Dudley, the organizer, is at the center in the front row. Many prominent leaders in the Visual Education Movement, may be found in this group.



W. H. DUDLEY, CHIEF OF BUREAU OF VISUAL INSTRUCTION, UNIVERSITY
OF WISCONSIN

Mr. Dudley established the first visual instruction center in an American University, and organized The National Academy of Visual Instruction



theater screen, the reflection is inevitable that this new and powerful method of impressing the mind should be available to the schoolroom as well. And they have made various attempts to get the movie into the schoolroom. The National Academy of Visual Instruction is a noteworthy effort to get together like-minded educators to study the educational aspects of the moving picture. The Visual Instruction Association of America is another illustration, and the newly organized visual education section of the National Educational Association is the most recent phase of this widespread educational interest.

Various universities and city school systems have organized centers for distributing films to schools on both a free and rental basis. Several departments of the United States Government have produced educational films which are available to educational institutions. Five educational film magazines have been started; these have successively been merged, until now only one, the Educational Screen, Chicago, represents the interests of the Educational film field. We are told that statistics of portable motion picture projector manufacturers reveal that approximately 30,000 motion picture projectors have been sold to schools, churches and business firms. The DeVry Corporation for whom I have edited educational films has sold over 12,000 portable motion picture projectors. Every investigation made of these users, however, indicates the school showings started with entertainment films in the assembly room, and most of them remain at that stage today. The reason is the obvious one of the availability of the film supply. These entertainment showings

are mostly the partly worn-out prints of the theaters, frequently obtained in irregular fashion by film brokers and doled out to schools at whatever rental rates they could be prevailed upon to pay.

Film showing in schools cannot compete with the theaters in general entertainment values; for entertainment is the peculiar field of the theater and it has mastered that field with a wealth of effects impossible to amateurs. Films for instruction, however, come within the peculiar field of the schools and they should combine with professionally trained producers to bring the educational film to its highest technical and pedagogical possibilities.

The Risks of Educational Film Production

The attempts made by educators or those interested in the educational film to produce classroom films for serious study purposes have practically all ended in financial loss, or at best in profits too modest to bear any comparison with theatrical producers. One has only to recite the list of the brave adventurers in the educational production field, to realize the truth of the above statement:

American Motion Pictures Corporation.

Beseler Educational Film Co.

Bray Productions, Inc.

Community Motion Pictures.

J. E. Holley.

Lincoln & Parker Film Corporation.

National Non-theatrical Motion Pictures, Inc.

George E. Stone.

Charles Urban (Kineto).

Some of the firms named above have "passed," and those that remain are holding on either because of great faith and unusual courage and resource, or because they have shifted the bulk of this production from educational to other types. The most striking example of such a shift is that of the Educational Pictures Corporation, its name being now an unfortunate misnomer, and only the afterglow of its former educational activities. Its chief releases now are comedies and other short-subject theatricals. The Yale University Press, in order to undertake the production of their historical photoplays, had to make them acceptable to theaters in order to get returns on the large investment involved. Tolhurst and Ditmar have secured theatrical connections to make possible their unusual scientific films; Herm is putting up a valiant fight for independent production; Wythe has survived by taking his pictures bodily to the school-rooms.

On the other hand, evidence is increasing that the big producers are going to find it profitable to produce classroom films. Sporadic attempts looking for quick profits and initiated by men in the organization unfamiliar with educational contacts and with educational departments headed by theatrical film men unable to talk the language of the schools, were doomed to failure.

But that such failures were unnecessary is shown by the success of the educational department of Pathé Exchange, Inc. Here ample capital and wide intelligence is provided for educational supervision and educational editors acceptable to educators. Pathé engaged

competent school men and women to edit not only the classroom films they produced, but a series of teachers' leaflets as well which are models of practical pedagogical treatment, and have had a very wide use in the schools. Many of the Pathé Educationals are placed in the Film Libraries Outlined in Chapter II, and a sample Teacher's Leaflet is given in Chapter V. Most of the Nature study films used by the Neighborhood Motion Picture Service (p. 241) are the Pathé Screen Studies.

The new series of the Ford Educational Film Library, while not made by a theatrical producer, is nevertheless an example of experienced direction and ample capital applied to true educational motion pictures. These have editors similar to those of the Pathé Screen Studies, and issue teachers' leaflets of a high degree of excellence to accompany each film. The Ford management has wisely decided to sell their prints directly to schools on non-inflammable stock, practically at cost, thus encouraging the movement for permanent film libraries to be owned by the schools themselves. Pathé has a long-time lease arrangement which amounts to much the same thing. The extensive Ford list is given under Purchase Films in Part II.

Free Films Drove Out Rental and Purchase Films

Free films of a semi-educational nature issued by industrial concerns and welfare organizations, while apparently a godsend to schools and churches at the beginning, operated in the end to discourage the pro-

ducers of classroom films. Although these free films were not designed primarily for the classroom, they were nevertheless used for instructional purposes and drove out the rental films. Institutions that had formed the free habit refused to pay living prices for rental films. When they did rent, they usually rented old prints at cut rates from small dealers who made a business of buying up vagrant prints of this character. The result was to discredit the educational value of the movie for the users and wreck those enterprising individuals who had risked their incomes on educational film production.

The free film producers and distributors were not to blame. They invested fortunes to secure films worthy of showing in schools, and they frequently produced the most valuable educational reels. The mischief was due to a lack of discrimination among educational users. Semi-educational propaganda films had a legitimate place and use, but they were not designed to displace the true educationals made by educators for educators as specific adjuncts to the course of study in the classroom recitation.

Much of the early teaching with motion pictures was done with these quasi-educational films; and even serious pedagogical experiments * were performed with these dual purpose films. This labor was by no means lost. The accumulated experience of educators in

* "See films used in the Freeman Experiments, Freeman's "Visual Education" (Bibliography); also an article, "A Psychological Analysis of Moving Pictures as Means of Instruction," by Carter, which is based entirely on films produced by the publicity department of a well-known commercial firm.

using such films to illustrate the curriculum constitutes an interesting body of data for consultation by future investigators.

The Rental Film an Anomaly in Schools

There is a question if expensive films, for which a legitimate rental must be charged, will ever be the basis of classroom film showings. Schools are not given to renting apparatus. School apparatus should be constantly available for illustrative purposes. The electric machine cannot be viewed once by a class and then pass out of the school forever. Such fleeting glimpses would have but small educational value. Films, too, must be purchased. The school film will ultimately have to be purchased outright by the schools and kept for repeated use to get real educational results.

School boards must be educated to appropriate adequate funds for purchasing films, as they do for buying maps, globes, books and typewriters. When a major fraction of the 200,000 schools of the country adopt this policy, competent producers will be willing to risk the capital necessary for the production of pedagogical films, or to release for sale prints from existing negatives.

A form of rental very useful for smaller cities is the nominal rental charged by state universities and state departments for films which they have collected for the use of schools in the state. Extensive libraries of this sort are in active circulation at the state universities of Wisconsin, California, Indiana, Minnesota

and several other states. In Massachusetts, New York and North Carolina, distribution is through state departments at the seat of government. In many large cities, museums and libraries have a similar service. A list is given in Chapter IX.*

Only non-inflammable prints should ever be purchased by schools, as otherwise storage of films in buildings raises insurance rates because of the fire hazard.

A list of firms having educational prints for sale is given under Purchase Films in Part II, and the DeVry Negative Library and the Bray Educational Library from which non-inflammable prints may be ordered in short lengths, have already been mentioned.

The Production of Educational Films

A film producer recently assured the writer that a very modest cost for a five reel production is \$50,000.00. Five thousand dollars a reel is below the ordinary theatrical production rate. The classroom film will cost but a fraction of this amount, as only rarely will paid actors be needed or expensive scenic sets. But there will be considerable expense nevertheless. For scientific films expert camera men should be employed with special lenses for microscopic work. Experienced artists are needed, for animated and phantom drawings. The greatest scientists and teachers of the country should plan the films and should be well paid for it, al-

* An exception, in favor of rentals, should also be noted in the case of a well-organized system of rental films like that of the Neighborhood Motion Picture Service, described at the end of this chapter.

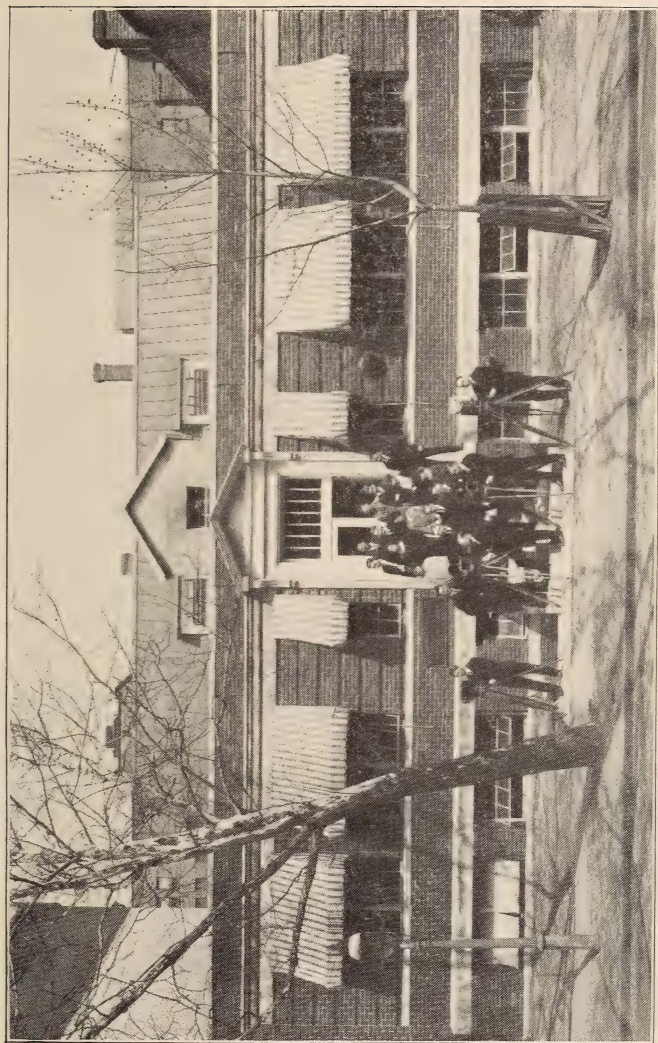
though satisfactory work could be done in the school laboratory. Studio lights and reflectors will be needed for interior photography. Nature, geographical, geological and other outdoor studies will likewise need the trained educator plus the expert camera man and the advice of experienced directors.

It may well be that the modern university will develop the technical camera expert and essential studio equipment, as at the University of Nebraska, or as has the Department of Moving Pictures of the United States Department of Agriculture at Washington, D. C. Views, however, of campus activities or of only casual educational significance can be taken by amateurs with the school movie camera. Low-priced movie cameras adapted for both professional and amateur use are now on the market. The best, strictly professional movie camera costs \$5,000.00, but \$150.00 will purchase a movie camera that will do the type of work here referred to. Only cameras taking full width Standard films (35 mm.) should be used.

Schools Should Combine and Use the Big Producers

Historical plays like the Yale Chronicles and plays illustrative of standard literature should probably be given over to big producers, with faculty guidance on historical, dramatic, literary and ethical values.

The path of least resistance to follow just now would be for schools desiring fine technical work on purely educational films to pool their resources and offer the technical producer a volume market which would justify his capital investment. State teachers' associa-



Courtesy of Educational Screen

MOTION PICTURE STUDIO, U. S. DEPARTMENT OF AGRICULTURE—p. 228



tions, state parent-teachers' associations, city associations of teachers, principals, regional associations like the North Central Association, could appoint committees to work out the courses desired, and coöperate throughout the production with the movie studio. The various subject-matter groups or sections of the National Educational Association might undertake the task. The undertaking would cost too much for any one school to attempt, but in numbers there is purchasing power.

An organizing genius with the educator's point of view who could get the numerous small non-theatrical exchanges which deal in old prints to combine their resources, junk their old prints and initiate educational production on a scale commensurate with the importance and dignity of the work would do a wonderful service to the cause of visual education.

George E. Stone, who has put visual education forever in his debt by the scholarly films he has produced in biology, has written an earnest plea * for the endowed educational film. Foundations like the Rockefeller, Carnegie and Commonwealth are needed to supply the means for the elaborate equipment and high salaried men required to give the bona fide educational film its place in the sun. And Nelson L. Greene, editor of the *Educational Screen*, thus calls the attention of the theatrical magnates to the possibilities of production and distribution in the non-theatrical field:

The theatrical film market can be definitely measured. In round numbers we can call it 20,000 projectors, for only one projector

* George E. Stone, "Visual Education—a Retrospect, an Analysis and a Solution," *Educational Screen*, December, 1925.

runs at a time in the 20,000 theatres. Averaging all of them, running time is but a very few hours per day. Rentals are high, but sales expense eats up an enormous fraction of receipts. *And these 20,000 projectors are 100% of the possible theatrical field.*

The non-theatrical film market has not reached 1% of its possibilities. It has perhaps 15,000 projectors. But one third of them is unused; another third used occasionally; the other third may be running to half their capacity. The average run is but a few hours per week. Add to this that film-rentals are ridiculously low. Naturally such a field is practically ignored by all but a very few theatrical producers. And yet a mere 20,000 schools—with projectors usable from 9 A. M. through the day and evening for school and community purposes, several projectors even running at the same time in different rooms—would equal or exceed the total theatrical run, *if the schools could get the film. And "20,000 schools" are about one fortieth ($\frac{1}{40}$) of the non-theatrical field.*

What will "100% of the non-theatrical field" mean? There are in the United States (naming always round numbers far below the actual figures), 200,000 schools, 200,000 churches, 200,000 clubs, lodges and community centers, besides another 200,000 projector prospects in colleges, normal schools, universities, hospitals, prisons, welfare institutions, hotels, railroad stations, public parks and playgrounds, on trains, steamships, airships . . . not to mention American homes. Here are 800,000 potential projectors, or 40 times the number of theatres. Further, this vast field as a whole is already inclined to install projectors, they do not need to be "sold." Why, then, have the 800,000 bought only 15,000 projectors to date? For two reasons, one unimportant, the other all-important.

First, the cost of the projector. This is a minor matter. Even small schools and churches manage it. The pitiful part of it is that thousands of these hard-won projectors have had to go into cellars and closets to gather dust. The rest of the field knows this, and hence refrains from buying.

Second, *the lack of films—and this is the crux of it all.* The non-theatrical field has lived from the beginning on miserable stuff, the crusts and the crumbs. It is tired of the crude relics of early productions, tired of worn-out prints from negatives long since out of circulation, tired of the nondescript film efforts of well-

intentioned pedagogues and earnest amateurs. Improvement of theatrical pictures has created taste and appetite for films of quality, and the non-theatrical field wants that quality. It cannot get it yet. It is waiting only until it can. *And where will this film come from? It can come only from those who have the knowledge, skill and resources for making quality films, namely, the theatrical producers.*

The vast non-theatrical market is there, eager and ready to start. It is 40 times the size of the theatrical market when it gets the projectors. It will get the projectors itself the moment it knows that serious production has started—and the projectors will go in faster than the films can be produced. Rentals will be higher than now—for the films will be worth it—but always lower than for the theatres. There is ample compensation for this lower rental—the size of the field, its willingness to wait until the film has earned its maximum profit in the theatres, no more need for costly advertising, and longer circulation life because non-theatrical value is a matter of content, not of date. The theatres will always have the new releases, the non-theatrical field will always take them second-hand—demanding only that the pictures are good (which means, incidentally, that the conflicting interests of the theatrical exhibitors and the non-theatrical field are largely imaginary).

The Rockefeller Foundation has, in a small way, helped to make possible certain welfare propaganda films that are being distributed by health organizations. The Commonwealth Fund granted the sum of \$10,000.00 for pedagogical research with moving pictures, which instituted the series of experiments reported in Freeman's *Visual Education*. The most valuable aid private wealth can furnish pioneer enterprises is to carry them well through the demonstration stage and leave the public to continue the good work. Carnegie has done that with libraries, the Carnegie Foundation, with teachers' pensions, and the Rockefeller Foundation has assisted numerous investigations to work through the demonstration stage. Such a

beneficence would undoubtedly hasten the advent of the educational film library for schools. However, the foundation is only one way of getting new things done—and while some are working for an endowment, others may pursue the more ordinary paths of education of the public, and coöperation of educators and manufacturers, by which educational progress has, in the main, made its way in America.

Taxation, the American Way

The American people, in its taxing capacity, is well able to take care of the expense involved in equipping schools with motion picture machines and film libraries, when once it is convinced that motion picture illustrations are desirable for educational progress. Manual training equipment, domestic science and athletic apparatus, music and playgrounds require as much expenditure as films, but the expense is now provided for by school boards as a matter of course. If the schools will buy the films, the regular producers will furnish the capital and workers. Visual education equipment should certainly rank with playground and music equipment in accrediting schools by high school and elementary school inspectors.

The various educational associations mentioned can get the films produced by merely showing a sufficient number of orders for the prints. The needed motion picture illustrations can be worked out by committees of leading educators working preferably in subject-matter groups, and the list, when so recommended, would command the confidence of purchasing bodies,

which in turn would start the wheels of production in the studios of the world turning out technical products for a market of 200,000 schools, housing twenty million students.

Training Teachers for Visual Education

Elsewhere in this book (Chapter IX) is given a list of institutions that are known to offer courses in visual education for teachers, with college credit. This work is of first importance in the sane administration of a group of aids peculiarly susceptible to flashy and entertaining results. To this list of universities and normal schools, should be added teachers' institutes, conventions and special schools of instruction. The author has accepted a number of invitations at teachers' institutes to put on a demonstration of acceptable methods of using visual aids in the classroom. Through a special arrangement with a manufacturer of approved motion picture projectors he was able to furnish machines, films and slides, and he was his own operator. From this experience he is convinced that this method of teaching teachers in service is the most available, and capable method of producing immediate and practical results.

McLean County Teachers Institute

Some county superintendents devote from one to three days to an intensive demonstration of visual education methods before their institutes. Here is a sample program of this character:

McLean County Teachers Institute

Thursday, Friday, and Saturday,
December Seventh, Eighth, and Ninth

BLOOMINGTON HIGH SCHOOL AUDITORIUM

THURSDAY

- 10:00 Music
 10:30 "Problems of Preadolescence" Pringle
 11:15 "Changing Conceptions and Ideals in the Writing and Teaching of History" Tryon
 12:00 Noon Intermission
 1:20 Music
 1:30 "The Present Status of Visual Education" McClusky
 2:20 "How to Use the History Text-book" Tryon
 3:10 Exhibits and Educational Films. Intermission
 3:40 "The Use of Visual Aids in Rural Schools" Hollis
 4:30 Close
 Exhibits open until 5:00 o'clock.

FRIDAY, DECEMBER EIGHTH

- 8:45 Music
 9:00 "Psychology in Relation to Education" Cameron
 9:50 "Results of Some Experiments in Visual Instruction" McClusky
 10:40 Exhibits and Educational Films. Intermission.
 11:10 "The Place of Concrete Experience in Education" Freeman
 12:00 Noon Intermission
 1:20 Music
 1:30 "Methods of Study" Cameron
 2:20 "Types of Visual Experience and their Educational Value" Freeman
 3:10 Exhibits and Educational Films. Intermission.
 3:40 The Place of the Various Types of Visual Instruction Material in the Modern School Hamilton

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4:30 Close
Exhibits open until 5:00 o'clock.

SATURDAY, DECEMBER NINTH

8:45 Music
9:00 "Better Every-day English" Paul
9:50 "Visual Equipment for School Systems and How to
Administer Same Efficiently" Hays
10:40 Exhibits and Educational Films. Intermission.
11:10 "The Teacher's Vision" Paul
12:00 Noon Intermission
1:20 Music
1:30 "The Technique of Testing Imagery" McClusky
2:30 Close
Exhibits open until 4:00 o'clock.

DEMONSTRATIONS

Miss Lucille Greer will give class demonstrations showing the use of the stereograph in teaching.

These will occur in room 215 as follows:

At 3:40 Thursday, a second grade class.

At 11:10 Friday, a fourth grade class.

At 1:30 Friday, a sixth grade class.

At 3:40 Friday, a second grade class.

At 9:50 Saturday, a fourth grade class.

At 11:10 Saturday, a sixth grade class.

There will be two conferences where superintendents, principals and others may confer with Dr. McClusky on Methods in Visual Education. These will be at 3:40 on Friday and 11:10 on Saturday in Room 205.

A talk will be given on the Care and Use of Films. Time and place will be announced.

EXHIBITS

The exhibits are from the Field Museum of Chicago, The National Society for Visual Education, The St. Louis Museum, The

Philadelphia Commercial Museum, The Animatograph Company, The Bausch & Lomb Optical Company, The Keystone View Company, The DeVry Corporation, The Cleveland Public School Museum, The University of Illinois, The Welch Scientific Company and others.

LECTURERS

Dr. F. D. McClusky, School of Education, University of Illinois.

Dr. Frank N. Freeman, Professor of Educational Psychology, University of Chicago.

Prof. Dudley Grant Hays, Director of Visual Instruction, Chicago Public Schools, President National Academy of Visual Instruction.

Prof. A. P. Hollis, Department of Visual Instruction Service North Dakota Agricultural College.

Dr. E. H. Cameron, Professor of Psychology, School of Education, University of Illinois.

Dr. Harry G. Paul, Head Professor of English, University of Illinois.

Prof. Rolla M. Tryon, Professor of History Teaching, University of Chicago.

Prof. Ralph W. Pringle, Principal of the University High School, Normal University.

Prof. G. E. Hamilton, Educational Department Keystone View Company.

Another county has just requested assistance in holding visual instruction demonstrations in a series of teachers' meetings to cover the whole county. The more usual method, however, is to have one or two exercises on the institute program devoted to the more difficult phases of the problem. This includes threading and operating the machines.

An outstanding example of a special school for training teachers in visual education is the one organized by the DeVry Corporation, a prominent manufacturer of motion picture projectors in Chicago. This firm



THE DANCE AT THE HUSKING BEE. SCENE FROM "THE CORN-BELT DERBY," U. S. DEPT. AG.

holds a free school of visual education each summer and employs educators of recognized standing on its faculty. The program of this school for the summer of 1925 is given:

THE DEVRY SUMMER SCHOOL OF VISUAL EDUCATION,
1111 Center St., Chicago Ill.

PROGRAM

MONDAY, JULY 27TH.

Forenoon session 9 o'clock.

The Advancement of Visual Education. H. A. DeVry,
President, The DeVry Corporation.

The Modern Stereopticon, Condensers, Objectives, Slide Carrier.
A. E. Gundelach,
Vice-President, The DeVry Corporation.

The Modern Slide. A. P. Hollis.

(a) Photography (Score Card).

(b) Coloring.

Teaching a Reading Lesson With the Stereopticon.

Dudley Grant Hays,
Director of Visual Instruction, Public Schools, City of Chicago.

Afternoon session 2 o'clock.

Round Table and Question Box.

(1) Teacher-Pupil use of the slide in reading recitations.

Nelson L. Greene,
Editor, *Educational Screen*, Chicago, Ill.

(2) Practice lessons with slides—each member of the school to teach a lesson with one slide selected in the forenoon.

Direction of Messrs. Gundelach, Greene and Hollis.

(3) Factory inspection tour to observe manufacture of complete stereopticon.

G. K. Weis, Superintendent of Factory, and Mr. Gundelach.

TUESDAY, JULY 28TH.

Forenoon session 9 o'clock.

The Portable Projector in Industry.	A. E. Gundelach.
The Literature of Visual Instruction.	Nelson L. Greene.
The Geneva Movement.	H. A. DeVry.
Visual Education in a City School System.	Dudley Grant Hays.
Types and Sources of Film For Non-Theatrical Projection.	A. P. Hollis.
Visual Education Methods in the World War.	Nelson L. Greene.
Exhibition of a Worth-while Film.	

Afternoon session 2 o'clock.

Community Work With Films.	Dr. R. P. Shepherd,
	Author of "Essentials of Community Efficiency."
Round Table and Question Box.	
(1) Demonstration of expert threading, and use of two machines for projection of more than one reel.	J. W. Lang.
(2) Instruction in threading—each member to thread a piece of film through machine.	F. Balkin.
(3) Successive Processes in Manufacture of Intermittent (Geneva Movement).	G. K. Weis.
Factory Observation Tour.	

WEDNESDAY, JULY 29TH.

Forenoon session 9 o'clock.

Notes from the Non-Theatrical Field.	A. E. Gundelach.
Finding the Facts in Visual Education.	F. D. McClusky,
	Department of Education, University of Illinois, Urbana, Ill.
Motion Pictures in Church Work.	Rev. Frank E. Jensen,
	Editor of the Department, The Church and Pictures,
	<i>Educational Screen.</i>
Modern Projection Illuminants and Optics.	C. E. Egeler.
	Commercial Engineer, General Electric Co., Cleveland, Ohio.

THE FUTURE OF EDUCATIONAL FILMS 239

How the International Harvester Company Uses Motion Pictures.

H. C. Ray.

Teaching a Lesson With a Motion Picture Film. F. D. McClusky.

Exhibition of a Worth-while Film.

Afternoon session 2 o'clock.

Round Table and Question Box.

- (1) Practice by each student in operating machines and giving short lessons using films at various points in the lesson (film as introduction—summary—talking with film—stop on film. Using films to inspire pupil activity—compositions—talks—reviews.)

Directed by Messrs. Hollis, Gundelach and Balkin.

- (2) Use of Rheostats and Transformers.

Messrs. Weis, Lang and Balkin.

- (3) Factory Processes in Manufacture of Lamp Housing and Optical Supports.

G. K. Weis.

Final Assembly in Case.

J. W. Lang.

THURSDAY, JULY 30TH.

Forenoon session 9 o'clock.

The Take-ups, Rewinds and Stop-on-film shutters. H. A. DeVry.
Professional and Semi-Professional Projectors.

Visual Education Departments in Universities. H. W. Norman,
Director of Visual Instruction, University of Indiana, Bloomington, Ind.

Fire Hazards and Laws. A. E. Gundelach.

The Place of the Museum in Visual Education.

Miss Amelia Meissner,

Director, Educational Museum, St. Louis, Missouri.

Merchandising with Motion Pictures. Douglas Rothacker,

Rothacker Film Manufacturing Company.

Americanization Work with Films. F. S. Wythe.

Author of the film, "Citizens in the Making," New York City.

Exhibition of a Worth-while Film.

Afternoon session 2 o'clock.

Educational Motion Pictures in Europe Albert Bachold,
Distributor of Visual Education Equipment, Zurich, Switzerland.
Round Table and Question Box.

- (1) Operation of Super-Projectors.

Messrs. DeVry, Lang and Balkin.

- (2) Oiling and Repairing Motion Picture Projectors.

Demonstration before class.

Oiling spots of constant need—spots of only occasional need.

- (3) Repairs—the vulnerable spots in a motion picture projector.

J. Lang.

- (4) Patching Film, and Methods of Storing and Cleaning Film.

- (5) Screens.

FRIDAY, JULY 31ST.

Forenoon session 9 o'clock.

The Better Film Movement. George J. Zehrung,

Director New York Y. M. C. A. Motion Picture Bureau.

The Construction of the Moving Picture Camera. H. A. DeVry.

(The entire school will be shot with the movie camera. Prints
will be sent to those desiring them.)

Motion Pictures in Religious Work for Young People.

Afternoon session 2 o'clock.

A Visit to a Moving Picture Studio and Laboratory (Courtesy of
the Rothacker Film Manufacturing Company).

Actors and actresses at work on a production. Developing and
Printing Motion Pictures. Tinting, toning, color processes.

Examples of this kind show the widespread interest
in the better type of visual education and are eloquent
of the future usefulness of these promising new aids to
education.

The Neighborhood Motion Picture Service, Inc.

A most promising enterprise is a ready-made correlated film service, including projectors and operators as well as films, known as the Neighborhood Motion Picture Service, now being worked out in Los Angeles, New York and New Jersey. F. S. Wythe, producer of the series of Americanization films, "Citizens in the Making," after years of contact with the school situation became convinced that the schools were holding back from visual education methods primarily because it seemed to involve so many difficulties—large sums of money, film supply, correlation with courses of study, purchase and installation of motion picture projectors, operation and repair of the machines, questions of storage and fire hazard, and the prompt and safe distribution of these materials.

The thing to do, in his mind, was not merely to bombard the schools with pamphlets and magazine articles, and speeches at educational conventions, but to smooth out for them the difficulties mentioned above, and construct a service that would combine all the elements above with the difficulties left out, so that it could be offered to schools in such a way, that about all the superintendent would have to do would be to sign on the dotted line and let the outside organization shoulder the details.

The booklet issued by the Neighborhood Motion Picture Service states:

The films supplied are Film Lesson courses, 18 one reel lessons in each course, or enough for bi-weekly lessons throughout the full school year.

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The Neighborhood Motion Picture Service, Inc., is not engaged in the occasional rental of special subjects, but confines itself to film courses of correlated lessons.

Film Lesson courses are:

Important: thereby justifying their inclusion in any course of study adapted to motion picture presentations; thereby justifying the use of motion pictures as against any other supplemental aid.

Technically adequate: produced under the direction of competent educators by competent motion picture experts for exclusive school use.

A critical examination of the films supplied in these schedules bears out all the claims made above. In fact most of these films are included in the film libraries given in Chapter II of this book.

The Neighborhood Motion Picture Service has added to this film schedule, through arrangement with a prominent motion picture projector manufacturer, the use of a projector and operator to schools having no machine equipment, so that every two weeks each school has delivered to it three educational films, a projector and an operator. For schools already equipped there is a liberal bi-weekly film service in which the distribution and collection is taken care of by the service.

Thus far the usual plan is for an organizer to get the county superintendent of schools to call a meeting of the principals interested in his county or district and have the plan presented to the group so that as many schools as possible may agree to operate around a common center, usually the county seat. The more schools sign up under the same plan, the less the cost to each school.

The service operates under eight plans known respectively as:

Plan I. Complete Service—(film lessons, projector and operator but no films left).

Plan II. Film Library Service—(film lessons only).

Plan III. Film Library and Projector Service—(film and projectors delivered—no operator).

Plan IV. Film Library, Projector and Limited Operator Service—(a combination of plans one and three).

Plan V. Same as Plan I, with extra projector left for continuous use.

Plan VI. Same as Plan I, with use of any of the thirty-six reels of nature study and citizenship at any of the bi-weekly lessons.

Plan VII. Same as Plan II, except films remain one week instead of two, thus permitting more schools to be served at a lower cost per school.

Plan VIII. Exchange Service—any film in the whole series may be rented at any time as from any regular exchange.

Real Educational Films

Using his own films as the standard and nucleus, Mr. Wythe has assembled the finest classroom (text) films to be found in the country. Not every subject of study in the modern curriculum is illustrated by these films, but three important ones are quite fully treated. These are nature study, Americanization and current events, for the first year. The second year would add eighteen films in history, and the third year eighteen in

geography. All films used are on non-inflammable stock, so that there is never a question of fire hazards involving booths, insurance and licensed operators, which have proved such obstacles to school installations in some cities. Many of the films used are the same as those which form the foundation for the three film libraries recommended in this book.

Teachers' Leaflets

Another great difficulty confronting schools starting modern visual instruction methods is the fact that many teachers have not yet learned how to use films in regular classroom recitations, so as to avoid mere film showings that do not stimulate thought and release the energy of the students. While a few normal schools and several universities now offer courses in visual education, these are very recent and have not reached the great mass of the teaching profession. Neighborhood Motion Picture Service supplies a teachers' manual with each subject, and abundant notes and questions are given on each lesson. Two of these are given as sample film lessons in Chapter V of this book.

Low Cost

On account of the block system of securing and distributing the films, projection and pedagogical plans can all be furnished at the usual rental cost of the films alone. Thus far the service has operated in a limited area near New York City where the presence of its originators and their enthusiasm and grasp of its

problems have sold it to the school systems. A plan to present it in the same way to school systems from coast to coast has recently been consummated so that its range of usefulness may be extended to the whole country.

Should the larger school systems, or others having already had sufficient experience to warrant their own initiative, wish to add a wider range of films to illustrate these and other subjects in the school program, it will be easy to select additional films from the lists given in this book.

Purchase films have no part in the plans of the Neighborhood Motion Picture Service. Its plans contemplate schools renting, rather than owning films. The author believes that ultimately schools should purchase their libraries of films for continuous use during the year, just as they purchase books for the library, slides, stereographs, stereopticons, motion picture projectors and other useful school apparatus.

However, while we are waiting for this ideal condition to occur, the author knows of no practical film service, or combined film and projector service that compares with that offered to schools by the Neighborhood Motion Picture Service.

As far as the author knows there has been no communication between the Neighborhood Motion Picture Service, Inc., and Visual Education, Ltd. of London, and yet the film pamphlet of this latter organization which has just come to hand, shows that the same conditions, demanding the same service, obtain in Great Britain. Their plan of service to the schools lies so closely along that of the Neighborhood Motion Pic-

ture Service that a part of it is reprinted here for comparison:

A well-planned Visual Lesson, illustrated by the right Kinema Film is valuable as a lecture . . . it imparts knowledge presented in an attractive manner: but this is not enough.

A Lecture or Lesson which does not work hand in hand with the School's curriculum fails to support the Teacher and will not serve to make the Text Book live in the way it might do.

Visual Lessons should be given once a week or a fortnight in order to serve as a rallying point for the preceding teaching: they should amplify and illustrate the Teacher's work . . . and this is the object of the Visual Education Lectures.

The Schools which have adopted the Visual Lesson as a regular event find that teachers and pupils, as well as parents, support strongly a step forward which makes reality out of what before were abstract and imagined facts or statements.

Lectures and Lessons illustrated by the modern Kinema projector constitute the most important feature in Visual Education.

Our object is to use this medium to its full extent by employing:—

Lecturers who are specialists in their subjects.

The best possible films procurable.

The latest and best methods to assist the Teacher.

In order to meet the requirements of Schools and Colleges in general, Visual Education, Ltd. offer the following services:—

Lecture Service.

Operator Service.

Film Hire Service.

As this final chapter is being written, announcements have been made of two international film conferences, dealing with films in education, to be held in September, 1926; one at Basel, Switzerland, and the other in Paris. The Paris conference concerns itself principally with the theatrical film, but the educational aspect is recognized as a legitimate portion of the program.

It is significant, however, that the Paris Motion Picture Conference is under the auspices of the League of Nations. The French National Committee on Intellectual Coöperation is in direct charge of the congress. The Basel conference, however, is entirely on the educational film, and its announcement is a very good indication of the present European sentiment on the subject. A portion of the announcement is reproduced here:

In the course of the last decade great progress has been made in the introduction of the film as a means of instruction. In most countries eminent pedagogues have undertaken, in coöperation with the film industry, to utilize the incontestable advantages of the moving picture for teaching and for education in its broadest sense.—In all these efforts the following facts have become evident:

1. In many cases the film is a means of instruction of specific value, above all in such cases where incidents of life and movement are concerned which cannot be reached directly.
2. The highest aim is to adapt the use of the film in class instruction. The instruction of large numbers of pupils by means of the film and outside the class room may only be considered as a makeshift in transitory stages of economic difficulties.
3. For some particular subject-matter and large syntheses the instruction film on a large scale will always have a great value. Especially this type of film appears to be the most appropriate medium for popular education in a broad sense. The fight against the low class film is most efficiently conducted by means of the good film.
4. The State, in its attempt to combat the abuses in the moving picture industry, must make use, on a large scale, of the instruction film. The State is in duty bound to educate youth to a sound criterion and to cultivate its taste.
5. In spite of the good intentions of and the considerable sacrifice made by the producers of instructive films the films of this class today existent do not always come up to the requirements made

by the pedagogues. This may partly be due to the heretofore lacking coöperation by the educationists but also to the fact that the production of instructive or educational films has proved unprofitable owing to the reduced market for such films.

6. Notwithstanding the considerable number of educational films in existence there is up to the present no clear survey or system in this subject-matter. This leads to an overproduction in some lines while there are large gaps in others. The school authorities are quite often wholly dependent on the catalogs of the producers instead of finding assistance by the experience of neutral and expert pedagogues.

All these questions must be discussed and solved, but it would be futile to attempt a solution on a national basis inasmuch as the film industry has long ago become international.

Recognizing the fact that the State may no longer withhold its coöperation in this task, the undersigned authority has caused the governments of all countries to be invited to a First Conference on Educational Films to be held in Basel during September, 1926. The special object of the conference will be:

1. Discussion of the above mentioned questions of general interest by expert representatives from the various countries, in order to arrive at a clear survey of the subject-matter.
2. To adopt a uniform plan and system for the production of educational films. This is to afford the school authorities an opportunity to procure film material meeting fully the requirements and at the same time to provide a more extended and dependable market for the producers of such film.
3. To organize the international exchange of unquestionably good educational films.
4. To incite the authorities and educationists of all countries to intensive and clearsighted activity on the basis of mutual coöperation for the future development of the educational film.

The author has carefully refrained from rhapsodizing on the value of films in education, but Ellis and Thornborough * have put the case for the educational

* *Motion Pictures in Education.*

film in its legitimate uses, so cogently and eloquently that the whole passage deserves quotation:

To a greater extent than any still representation, the cinema is able to present objects as they actually exist, move and have their being; bring distant peoples into the classroom and show them actually going about their ordinary pursuits as they really did in the distant land when the picture was being taken; or, better still, it in effect transports the spectator to the distant land and enables him to mingle and live with its inhabitants, to view the country from the observation platform of a railroad train as it winds its way through the chasms and valleys and mountains, or to stand beneath the waterfall many hundreds of miles away and almost feel the spray upon his brow.

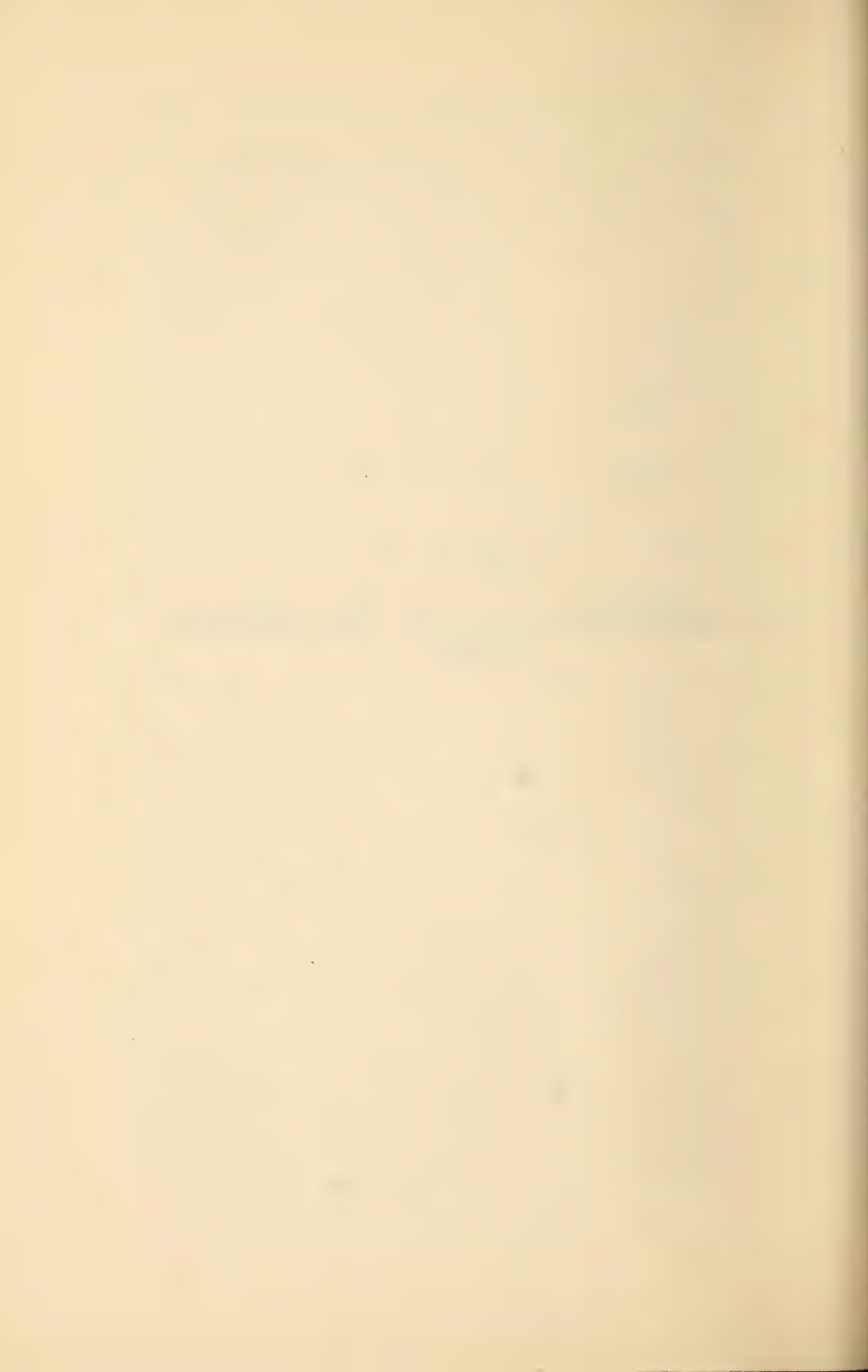
Motion pictures overcome time and space. By means of them rapid processes can be slowed down and analyzed; slow processes can be accelerated; inanimate objects become animate; dead facts made to live and pulsate. Attention can be held and concentrated and the memory more deeply impressed by the moving image projected on a brightly illuminated screen in a darkened room than by ordinary teaching methods.

Scientific experiments and demonstrations performed with this ideal equipment and under the best possible conditions, and operations performed in the clinic can, by means of motion pictures, be repeated indefinitely anywhere and at small expense. Microscopic life can be enlarged many times on the screen, so that what can ordinarily be seen with great difficulty through the microscope by only one at a time can easily be viewed on the screen by the entire class. Motion pictures expand the experiences of the pupils by bringing to them the whole wide world. Schoolroom instruction can by this newer medium be made more pleasant, less expensive in the long run and immeasurably more efficient.



PART II

COMPREHENSIVE LIST OF EDUCATIONAL
FILMS



GENERAL PLAN OF THE COMPREHENSIVE LIST OF EDUCATIONAL FILMS

(The listing is alphabetic by the first significant word in the title of the film. Such beginning words as "a," or "the" in a title, are not considered. Addresses of exchanges are given after the titles. Abbreviations used are explained in the footnote given on page 257.

FREE FILMS

GEOGRAPHY	261
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Central America	278
<i>South America</i>	278
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<i>Other Islands</i>	279
<i>Europe</i>	279
<i>Asia</i>	281
<i>Africa</i>	282
HISTORY	282
NATURE STUDY AND ZOÖLOGY	283
LANGUAGE AND LITERATURE	285
VOCATIONAL STUDIES	285

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<i>Domestic Science</i>	285
<i>Agriculture</i>	290
<i>Manufacturing</i>	298
Automobiles	298
Railroads	300
Building Materials	301
Cloth and Covering	302
Bookmaking, Printing, Etc.	304
Electricity	304
Metals and Minerals	308
Mining	309
Glass	311
Pottery	311
Miscellaneous	312
PHYSIOLOGY AND HEALTH	314
WELFARE	317
ATHLETICS AND SPORTS	321
ECONOMICS, BUSINESS, ETC.	322
ASTRONOMY, PHYSICS AND CHEMISTRY	323

RENTAL FILMS

GEOGRAPHY	324
<i>North America</i>	324
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Eastern States	324
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General	331
Alaska	332
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<i>Europe</i>	336
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<i>East Indies</i>	349
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<i>Asia</i>	354
<i>Africa</i>	361
<i>Physical</i>	362
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PHYSIOLOGY AND HEALTH	394
WELFARE	396
ATHLETICS AND SPORTS	396
CHEMISTRY	403
PHYSICS	404
ELECTRICITY AND MAGNETISM	404
MISCELLANEOUS	404

PURCHASE FILMS

BRAY PRODUCTIONS, INC., 120 W. 42nd St., New York City....	408
VISUAL TEXT SALES CO., 1268 So. Grenshaw Blvd., Los Angeles, Calif.	412
CARLYLE ELLIS, 220 W. 42nd St., New York City	416
RAYMOND L. DITMARS, New York Zoölogical Society, Borough	

256 MOTION PICTURES FOR INSTRUCTION

of Bronx, New York City	419
THE DEVRV CORPORATION, Motion Picture Projector and Camera Manufacturers, 1111 Center St., Chicago, Illinois	422
THE FORD MOTION PICTURE LABORATORIES of the Ford Motor Co., Detroit, Michigan	427
APOLLO FILM COMPANY, (Beseler Films), 286 Market St., Newark, New Jersey	432
URBAN-KINETO CORPORATION, Irvington-on-Hudson, New York	432

Reels issued by departments of the United States Government are listed under the proper subject-matter classification, in the list of free films, Part II (Comprehensive List of Educational Films). These are also sold to schools at cost.

OFFICE OF MOTION PICTURES, U. S. DEPARTMENT OF AGRICULTURE, Washington, D. C.

Department of the Interior, Bureau of Mines, Pittsburgh, Pa.

U. S. Department of Labor, Children's Bureau, Washington, D. C.

U. S. Public Health Service, Washington, D. C.

PATHE EXCHANGE INC., (Long Term Lease)—35 W. 45th St., New York City. The Pathé Films are listed under Rental Films in Part II, except those already listed in the film libraries in Chapter II.

Most of the industrial films (like the International Harvester Company and General Electric Company) who have films listed under Free Films in The Comprehensive List, Part II, will sell prints at cost to educational institutions.

Schools starting to form permanent film libraries would do well to write any of the firms or exchanges mentioned in this book, as many of them would make up prints to order, even though they do not advertise prints for sale.

COMPREHENSIVE LIST OF EDUCATIONAL FILMS WITH DESCRIPTIVE NOTES *

These films are in addition to the films used in the film libraries given in Chapter II of this book, and where more than the three reels per week of the One Hundred Twenty Reel Library are desired, these additional films may be ordered from the addresses given. The films are divided into three main groups: Free Films, Rental Films, and Purchase Films. Prices are occasionally given from as authentic sources as we were able to obtain, but they are not guaranteed, as there is little constancy in such matters among exchanges. The classifications used are those of the regular school studies, and the arrangement is alphabetical within each subject. The descriptive notes indicate in a general way the content and character of the film. Films starred (*) are accompanied with synopses and teachers' notes.

* Abbreviations occurring most frequently in this list:

- U. S. Ag. Office of Motion Pictures, Extension Service, United States Department of Agriculture, Washington, D. C.
Many of these Government films are handled by State Universities and other educational film distribution centers.
- Bu. Mines Bureau of Mines (U. S.), Pittsburgh, Pa.
- N. C. R. Educational Service, National Cash Register Co., Dayton, Ohio.
- G. E. General Electric Co., Schenectady, N. Y.
- W. E. Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.
- Can. M. P. Canadian Government, Motion Picture Bureau, Ottawa, Canada.
- Leggett J. A. Leggett, 1476 Broadway, New York City.

FILMS FOR HIGH SCHOOLS

(Not Arranged in Courses)

As explained before, many of the films recommended for the elementary grades, are suitable also for high school students, and even for the college classroom. It is the teacher's treatment of the film, her questions and supplementary facts, that will determine the grade of the film, more than the film itself. With older children technical features can be held on the screen (by means of the stop-on-the-film shutter) so that a more detailed study of mechanisms and complicated forms can be made than in the case of elementary pupils.

The three film libraries given in Part I are really all short, and entirely inadequate for the larger school systems. It should be borne in mind, however, that slide lessons will be as frequent as film lessons, perhaps more frequent, so that where only two film showings per week are held by the school, two or more slide lessons are probably given too, making four or more *screen lessons* each week.

Superintendent Emery of Pawtucket, R. I., a city of about 70,000 people, has made some careful studies* of the film needs of a city of that size, containing 25 school buildings. He recommends the rental of 10 or 12 reels a week during the school year, "These to be routed for a day at a time to the various larger schools, with occasional use with a portable machine in the smaller schools."

When there are 20 school buildings in a city, the film would need to be run 20 times—40 times if the teachers collectively have not had a preview of the films. This would require the film to be held several days in order to make the circuit of the schools. If a reel renting for \$4.00 had to be held 5 days, it might make the total rental for one reel \$20.00. It would

* James Newell Emery, "Visual Instruction in a Small City System," the *Educational Screen*, September, 1925.

be better economy, in such a case, for the school to purchase a print outright and use it whenever and wherever it was called for and make as many repeat showings as desired. Such a print would last a school from five to ten years, since two hundred showings are considered the average lifetime of a film.

School systems of this size and larger, while using our short courses as cores, should have the visual instruction committee dip into the Comprehensive List in Part II, and make out longer and more complete sets of film illustrations, in both the Elementary and High Schools.

Three short film libraries only are outlined in this book, merely to make it easy for small systems to start. One can go on adding reels indefinitely to make richer courses, from the list, with descriptions of each film, which is given in the pages following, thus enabling each system to build up its own courses.

PRIMARY GRADES NOT INCLUDED *

There are a number of fairy tales and fanciful pictures produced for children in the first three grades, but as these are chiefly entertaining they are not included in the film libraries. And indeed, motion pictures have very limited instruction values for children of the fourth grade. Several years ago the author made some experiments in showing

* Since writing the above the author witnessed several primary lessons with films under the general supervision of Miss Stella E. Meyer, Director of Visual Education, Forest Park, Ill. A health film in fairy story form (*The Knowing Gnome*) was made the basis of informal lessons. The teachers explained the titles as the films were shown. After each lesson the children were questioned by the teacher, and their answers showed that they had been greatly impressed by the story and one of the teachers suggested that the children dramatize the film. This they did in a very striking manner. This story type of film with educational implications can doubtless be used to advantage in primary grades—at infrequent intervals.

juvenile films to primary pupils, and later on was permitted to observe other teachers use films in primary grades and the results convinced him that in the main, it was not a profitable proceeding. Most of the titles were too hard for the children to read, and even where the vocabulary was simple, the speed was too great for reading. The pictures were also too speedy for intelligent following. The children's re-telling of the stories was greatly mixed in plot and details. Remembered portions from other children's versions of the story were introduced. Here the movies made for mental confusion. The still picture is greatly to be preferred for children up to nine years of age, where the aim is instruction.

FREE FILMS *

To obtain these films with the most economy, the teacher or school official in charge of visual education should write first to the state university, state agricultural college, state department of education, or the state department of health nearest him, as these educational distribution centers gather films from all sources mentioned and can give more favorable terms than private exchanges. If they do not have the desired films, then the addresses given after the title of the films should be tried.

The Motion Picture Bureau of the Y.M.C.A., 120 W. 41st. St., New York City, or 1111 Center St., Chicago, Illinois, has a large number of these free films for general distribution; so has the Educational Service of the National Cash Register Company, Dayton, Ohio.

* An interesting list of 195 pictures on 48 countries is published by the Extension Division of the University of California. Address Edward Mayer, Dept. Visual Instruction, University of California, Berkeley, California.

The unusually large list of this University and that of the University of Wisconsin, are of great value for reference, even if one does not live in those states.



SCENE FROM "SADDLE JOURNEY IN THE CLOUDS," CASTLE FILMS—p. 267



Films are one reel except where otherwise indicated. Non-inflammable prints should always be requested.

Geography

NORTH AMERICA

United States (Eastern States)

ACROSS THE ATLANTIC ON A GIANT LINER—*International Merchant Marine, 1 Broadway, New York City.*

An ocean voyage from New York to Cherbourg, France, on a giant liner—wonderful panorama of New York's skyline—interesting scenes of activities aboard ship—arrival at Cherbourg.

CLOUD-BUSTING—(WHITE MOUNTAINS)—*U. S. Ag.*

Adventures of an automobile touring party in the White Mountain National Forest, New Hampshire. Of general interest.

LABRADOR AND NEW ENGLAND—*N. C. R.*

Codfishing—fox farms—the whaling industry—the rugged coast of Labrador—Eskimo boys—Eskimo life—Twin Sister Falls—Newfoundland.

NEW YORK CITY—SKYSCRAPERS—*N. C. R.*

Handling the traffic at one of the busiest corners in the world—picturesque skyscrapers—a great public library.

NEW YORK CITY—FOREIGN POPULATION—*N. C. R.*

The famous East Side tenement district with children's playgrounds—also Ellis Island.

NEW YORK CITY—THE ELEVATED RAILWAYS AND WALL STREET—*N. C. R.*

Views of the elevated railroad system—the sub-treasury—Wall Street—Trinity Church.

NEW YORK STATE—BEAUTY SPOTS—*N. C. R.*

Interesting views of the Hudson River—Tarrytown—the Catskills—The Waterfall in the Bronx—Ausable Chasm.

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NEW YORK CITY—AROUND MANHATTAN ISLAND BY BOAT—*N. C. R.*

A steamer trip up the East River, through Hell Gate to the Harlem River, and down the Hudson past the Palisades—famous bridges.

NEW YORK CITY—BATHING BEACHES—*N. C. R.*

Mostly Coney Island.

NEW YORK CITY—TRANSPORTATION—*N. C. R.*

The elevated railway—subway—street cars—ferryboats, and busses.

NIAGARA THE GLORIOUS—*Can. M. P.*

A beautifully photographed scenic film. Niagara Falls, including panoramic and close-up views of the Horseshoe and American Falls, the Whirlpool Rapids, and the Gorge, together with glimpses of their picturesque environs.

NIAGARA FALLS—*N. C. R.*

Panorama of the world's most famous scenery—views of the Horseshoe and American Falls, the Whirlpool Rapids, and the Gorge.

NORTH WIND MASONRY (NIAGARA FALLS)—*N. C. R.*

The effect of winter's transforming hand on the splendor of Niagara Falls.

PROSPERITY SPECIAL, THE—*Baldwin Locomotive Works, Philadelphia, Pa.*

A trip through Pennsylvania behind twenty locomotives—views along the Susquehanna and through the Allegheny Mountains—Horse Shoe Curve and Pittsburgh.

SEEING WASHINGTON, D. C.—*N. C. R.*

The U. S. Department of Agriculture pictures the trip of the Boys' and Girls' Club champions through the nation's capital.

WASTE DISPOSAL IN CITIES—*N. C. R.*

First method: Discharging waste into the ocean—Second method: The action of bacteria through filters in purifying the sewage.

WHEN WINTER COMES IN NEW ENGLAND, NIAGARA FALLS, AND QUEBEC—*N. C. R.*

Winter scenes in New England, Quebec and at Niagara.

WINTER LOGGING IN THE WHITE MOUNTAINS—*U. S. Ag.*

Timber in the White Mountain National Forests and the lumberjacks' life and work.

United States (*Middle States*)ALONG THE GREEN BAY TRAIL—*Chicago, North Shore & Milwaukee Railway, Chicago, Ill.*

A famous Indian trail from Chicago to Milwaukee, traversed by a modern electric railroad, with glimpses of Fort Sheridan, the Great Lakes Naval Training Station, and views of the cities in between.

PACE OF PROGRESS—*Chicago, North Shore & Milwaukee, Railway, Chicago, Ill.*

The old Indian method of transportation compared with the prairie schooner, stagecoach and present day electric railroad.

PULLMAN TRAVELOGUE #1 } *The Pullman Co., Pullman*
PULLMAN TRAVELOGUE #2 } *Building, Chicago, Ill.*

The comfort of the modern Pullman coach compared with the ordinary day coach. All views of life and conveniences on board a Pullman.

United States (*Western States*)ABOVE THE CLOUDS IN RAINIER NATIONAL PARK—*Northern Pacific Railway, St. Paul, Minn.*

Superb mountain scenery of Mt. Ranier and Paradise Inn.

ARIZONA, IN—*N. C. R.*

A world of cliff-dwellers—Roosevelt Dam—giant cactus—other interesting scenery of Arizona.

ARIZONA, GRAND CANYON—*Castle Films, San Francisco.*

A beautiful picturization of a spot famous both for beauty and for geological interest.

ALASKA AND ISLAND POSSESSIONS OF U. S.—*N. C. R.*

The Yukon River region, with views of Eskimo dogs—the Hawaiian Islands—the sugar industry of the Philippine Islands and Porto Rico.

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BATTLE OF MUD—*Buick Motor Co., Flint, Mich.*

The struggles of an automobile through seas of mud; an excellent plea for good roads.

CARRISO GORGE—*Chicago, Rock Island and Pacific Railway, LaSalle Street Station, Chicago, Ill.*

The constructing of a railroad through a gorge. San Diego, California, comes into the picture.

CATERPILLAR CROWNING THE SUMMIT OF PIKE'S PEAK—*Caterpillar Tractor Co., Peoria, Ill.*

An unusual way to reach the summit of Pike's Peak by a "caterpillar" tractor. Wonderful scenery all the way along.

CROSSING THE GREAT SALT DESERT—*U. S. Ag.*

Overcoming the difficulties of the desert in building the Wendover road—the short-cut—unusual road engineering—mirages as seen by the motion picture camera.

DE VARGAS DAY IN SANTA FÉ, NEW MEXICO—*U. S. Ag.*

A picturesque religious ceremony.

DUDE RANCHES IN MONTANA—*Northern Pacific Railway, St. Paul, Minn.*

How a "tenderfoot" is broken in in the Absaroka Mountains near Red Lodge, Montana; also views of Beartooth and Sawtooth mountains.

ELECTRICAL TRAVELOGUE—*W. E.*

Another evolution-of-transportation reel, starting with the early Egyptians and ending with the electric locomotive; rich in the mountainous scenery of the West.

ENDURANCE—*Dodge Bros., Detroit, Mich.*

Wonderful work of an automobile through almost impassable roads, with glimpses of the oil country and the drilling and shooting of an oil well.

FIERY LANCE, THE—*U. S. Ag.*

Across the Continental Divide to a forest fire—a lesson in the causes of forest fires.

FROM A CAR WINDOW ALONG THE GREAT NORTHERN RAILWAY —*Great Northern Railway, St. Paul, Minn.*

Glimpses of great plains and great mountains in the western part of our country—the wide variety of surface and occupations observed.

FROM RANCH TO RANCH IN CALIFORNIA—*U. S. Ag.*

A picture of the trip taken annually by the California Farm Bureau agents under the auspices of the University of California.

GLIMPSES OF CALIFORNIA—*N. C. R.*

Views of Spanish Missions—Chinese children—wild ducks—alligators—petroleum wells under the sea.

GRAND CANYON ON THE COLORADO—*Leggett.*

A color film showing the natural beauty, and the vegetation of the canyon country, with views of the Hopi Indians and their homes.

GRAND CANYON AND THE WEST—*N. C. R.*

The Grand Canyon of Arizona—mountains of Utah—the Arapahoe Indians in Wyoming—horses and cattle of the great plains.

GYPSY SCIENTISTS—*N. C. R.*

The Cascade Mountain Ranges of the State of Washington are explored by a group of scientists.

HIGHROADS AND SKYROADS—*U. S. Ag.*

The construction of government roads through great forests; beautiful scenery enroute.

INDUSTRIAL OAKLAND—*Chamber of Commerce.*

A tour of one of the most interesting cities in the West, showing its industrial and residential sections, colleges, parks and playgrounds.

VALLEY OF HEART'S DELIGHT—*2 reels—Department of Visual Instruction, University of California, Berkeley, Calif.*

The Santa Clara Valley, one of the most beautiful districts in California—views of schools, universities and missions in San José, Santa Clara and the Stanford University at Palo Alto—the Saratoga Blossom Festival—blossoming orchards and harvest time—beach and park scenes, the Redwood trees, and nearby mountain peaks—Lick Observatory—the quicksilver mines.

MAN-MADE EDEN, A—*Leggett.*

An Eden from a desert, Los Angeles—homes and public parks—uni-

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versity—schools and churches—industries—the harbor with boats from the four corners of the world.

MEADOWS AND MOUNTAINS,—*U. S. Ag.*

Great mountain falls in Gallatin—Gallatin National Forest in Montana—feeding grounds of the elk.

MOUNTAINS OF OREGON—*N. C. R.*

How to open up a mountain road after a snowstorm—views of Crater Lake, Mt. Hood—glaciers and winter sports.

MOUNTAIN RANCH, A—*Dodge Brothers, Detroit, Mich.*

A mountain ranch in the heart of the Rockies—a trip with the "boss" over Colorado's largest sheep ranch, near Garo.

MY PAL—*Atlas Educational Film Co., Oak Park, Ill.*

Actually an industrial film, but made into an interesting story featuring the racer, Ralph Mulford, touring the Rockies; excellent scenery.

ON THE TRAIL OF THE BEAUTIFUL—*Leggett.*

Los Angeles—Santa Monica bathing beaches—Ocean Park, Venice, and Long Beach—Culver City and Hollywood, and a peep behind the scenes.

OPENING THE CHEROKEE STRIP— $\frac{1}{2}$ reel—*Chicago, Rock Island & Pacific Railway, LaSalle Street Station, Chicago, Ill.*

A reproduction of the unique land rush that occurred when the Cherokee Strip was opened to homesteaders in 1893.

OUTDOOR LIFE IN THE ROCKIES OF COLORADO—*U. S. Ag.*

The Holy Cross and White River National Forests—Hanging Lake—Snowmoss Lake—Thompson Canyon.

PACK TRAIN TRIP THROUGH WASHINGTON—*U. S. Ag.*

Across the Northern Cascades with mules, a tent, and a canoe—mountain streams and glaciers.

PILLARS OF SALT—*G. E.*

The mining and refining of salt—excellent photography one thousand feet underground.

RAINIER NATIONAL PARK—*Northern Pacific Ry., St. Paul, Minn.*

A typical tourist journey through Rainier National Park—rare scenic beauty and sports.

ROADS FROM SURF TO SUMMIT—*U. S. Ag.*

The national forests of the Pacific coast states from motor highways.

ROOSEVELT NATIONAL PARK—(*Proposed*)—*Northern Pacific Ry., St. Paul, Minn.*

A scenic reel through the good Bad Lands of North Dakota—scenes of some of strenuous days of Roosevelt's early manhood.

SADDLE JOURNEY THROUGH THE CLOUDS—*Castle Films, 268 Market St. San Francisco, Calif.*

A trip over central California's mountain range with saddle and pack—Devil's Postpile—Fenceposts of the Giants—Devil's Wash Basin—the Minarets—Shadow Lakes.

SAN FRANCISCO—*Castle Films and N. C. R.*

The N. C. R. film shows the busy streets, civic center, buildings and monuments of San Francisco. Chinatown is included and the Golden Gate Park.

SANTA FÉ NATIONAL FOREST—*2 reels—U. S. Ag.*

Points of interest in the Santa Fé Forest—fishing in the Pecos River—the Panchuela Ranger Station—skiing in June—Spirit Lake and the Continental Divide.

SANTA FÉ—*The following list of films, produced for the Atchison, Topeka & Santa Fé Railway, relate to this entire general region, and are obtainable through the general offices of the Atchison, Topeka & Santa Fé Railway, 80 E. Jackson Blvd., Chicago, Ill.*

Across the Grand Canyon	1 reel
Across the United States of America	1 "
California Missons	1 "
Chicago-California	2 "
Gallup Indian Ceremonial	2 "
Grand Canyon in Winter	1 "

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Grand Canyon National Park	2	"
Grand Canyon Tinted Reel	1	"
Indian Ceremonials and Dances	2	"
Indian Home Life and Industries	2	"
Old Missions of California	1	"
Sante Fé, New Mexico, and Vicinity	2	"
Santa Fé Fiesta	2	"
San Francisco, City of Hills, Etc.	1	"
Southern Arizona	2	"
Southern California Picture Book	2	"
Yosemite Valley over Tioga Pass	1	"

SCOTIA, THE HOME OF REDWOOD—*Pacific Lumber Co., 332 S. Michigan Ave., Chicago, Ill.*

Scotia, California, and its twenty-century-old redwoods, the oldest living things—scientific reforestation—a trip through a modern saw-mill—wood turning.

SEATTLE—*Chamber of Commerce of Seattle.*

A series of contrasted views between the Seattle of forty years ago and the vigorous, progressive city of the present day.

SIR LOIN OF THE T-BONE RANCH—*U. S. Ag.*

Cattle on the western range—stirring ranch scenes, as well as instructive methods of the industry.

SIXTY MINUTES FROM BROADWAY—*Leggett.*

Scenes in and around Los Angeles and Pasadena—lion and alligator farms—orange groves—San Gabriel Mission—Mt. Wilson and the observatory—Catalina Island and a view of the submarine gardens through a glass-bottom boat.

SPORTSMAN'S PARADISE IN COLORADO—*U. S. Ag.*

Fishing amid famous scenes—a harmless bear hunt—fire look-outs in the mountains—much of the scenery is in the Cache la Poudre Canyon and the north fork of the White River.

STORY OF THE ORANGE, THE—*Leggett.*

A famous picture produced by the California Fruit Growers Exchange and distributed by Leggett—the whole story of the orange from seed to shipment.



"Courtesy of Canadian Government Motion Picture Bureau, Ottawa, Canada."

CAMERA MAN OF THE CANADIAN GOVERNMENT MOTION PICTURE BUREAU PREPARING TO TAKE
SCENES FOR THE FILM "IN THE WAKE OF CAPTAIN COOK"—p. 274

STORY OF OUR NATIONAL PARKS—*Rothacker Industrial Films, Inc., 1339 Diversey Parkway, Chicago, Ill.*

A motor bus tour of Yellowstone, Yosemite, Grand Canyon, and Rocky Mountain National Parks.

SUMMER FUN IN WESTERN NATIONAL FORESTS—*U. S. Ag.*

Fishing, boating, riding, and motoring in some of the National Forests of the West—re-stocking lakes and streams with fish fry from the state hatcheries.

SUMMER HOME IN THE SIERRA NATIONAL FOREST—*U. S. Ag.*

How land may be rented from the government and a summer home built in the National Forest.

TOURING CALIFORNIA'S PORTS—*Leggett.*

Union Square, Chinatown, and Golden Gate Park of San Francisco—through the Golden Gate on a steel "greyhound"—Alcatraz Island, the prison island since the early days of the Spaniards—Los Angeles—San Diego—Balboa Park and Coronado Beach—an aquaplaning thriller.

TRAILING THE APACHE TRAIL OF ARIZONA—*Leggett.*

The great scenic highway—the start of the trail at Globe, Arizona—Sierra Ancha range—Roosevelt Lake and Dam—canyons and gorges—Tonto Apache Indians and the ruins of their ancient cliff dwellings.

TRANSPORTATION—*2 reels—W. E.*

This W. E. electric film was made by the Bureau of Mines in Pittsburgh, Pa., and shows the methods of transportation beginning with sleds drawn by slaves and ending with the powerful electric locomotive.

TUMBLING WATERS—*U. S. Ag.*

Water falls and other scenic wonders in Middle Creek Canyon and Gallatin National Forest, Montana.

UP TO HYALITE—*U. S. Ag.*

Adventures of a group of tenderfeet who are lost in the Middle Creek Canyon—the search for them headed by the Forest Service Men—mountain scenery enroute.

WATER FOR CITIES FROM NATIONAL FORESTS—*U. S. Ag.*

How Portland receives its water supply from the Oregon National Forest.

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WEALTH OF THE ABSAROKAS, THE—*Northern Pacific Railway, St. Paul, Minn.*

The picturization of the old-time prospectors and the gold miners in the Absaroka Mountains—Grass-hopper Glacier.

WHEN COWBOYS GET TOGETHER—*U. S. Ag.*

Frontier Sports—fun and skill in horsemanship.

WHERE RAILS END—*Chicago and Northwestern Railway (Atlas Educational Film Co., Oak Park, Ill.)*

A trip over a great railroad to Lander, Wyoming, the end of the road, and from there by stagecoach through the mountains to Yellowstone.

WICHITA NATIONAL FOREST AND GAME PRESERVE—*U. S. Ag.*

Weird rock formations and scenic wonders of this little-known forest—birds, bison, and an Indian buffalo hunt—wild turkeys and deer.

WINGED GUARDIANS OF THE FOREST—*U. S. Ag.*

Patrolling for forest fires with airplanes and balloons—scouting for fires—fire is discovered—soldiers and forest rangers to the rescue—methods of fire fighting.

WOOLLY WEST, THE—*2 reels—U. S. Ag.*

Sheep industry on the range—beautiful scenes in the Shoshone National Forest in Wyoming.

WORK OF A FOREST RANGER—*U. S. Ag.*

A diary of the daily tasks of the men who care for the national forests.

WAY OF THE WEST, THE—*N. C. R.*

The celebration called "Frontier Days" at Prescott, Arizona—daring rides by the cowboys.

WASHINGTON AND IDAHO—*N. C. R.*

This reel pictures Lake Chelan in the Cascade Mountains—the Kicket River—Yellowstone National Park, with its falls and geysers—Salmon River, Idaho—Box Canyon—Snake River.

YOSEMITE VALLEY, THE—*N. C. R.*

The Mountains of California—hiking on Mt. Lowe—the scenic beauty of the Yosemite Valley in summer and winter.

*United States (Southern States)***FISHING INDUSTRY IN FLORIDA—*N. C. R.***

Shark fishing—marine turtles—groupers—sponge fishers—an alligator hunt.

FLORIDA, THE PENINSULAR STATE—*N. C. R.*

Lighthouses on the Florida keys—St. Augustine—the winter home of Harriet Beecher Stowe on the shore of St. Johns River.

HOME OF THE SEMINOLE, THE—*N. C. R.*

The Everglades of Southern Florida—camps, occupations, and manner of living of the Seminole Indians.

IN DIXIE LAND—*N. C. R.*

Military School at Charleston—the Texas Rangers—an old quarry transformed into a garden—hanging moss—the Mardi Gras at New Orleans.

IN THE GLORY OF THE PAST (SAN ANTONIO)—*N. C. R.*

San Antonio, Texas—the Alamo—the Mission of San Juan—the Mission of San Francisco—the Mission of Conception.

IN THE SUNNY SOUTH—*N. C. R.*

Military training—a water power electric light plant—a pilgrimage of Russian gypsies—trout fishing in North Carolina—magnolia gardens in South Carolina.

INTO THE BIG CYPRESS (EVERGLADES)—*N. C. R.*

A trip into the Everglades to a camp of Seminole Indians.

LOOKOUT MOUNTAIN—*N. C. R.*

Springtime in Dixie—gathering holly and mistletoe—baptismal service in the Columbian River—Lookout Mountain, the location of one of the greatest battles of the Civil War.

MANUFACTURE OF ARKANSAS SOFT PINE—*Southern Lumber Co., Warren, Ark.*

From the felling of the trees in the forest to completed product—close-up scenes throughout, showing each operation.

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MISSISSIPPI RIVER IN DIXIE, THE—*N. C. R.*

The Mississippi River in Dixie—a swamp in Georgia; scenes along the Mississippi and Swanee rivers.

PRIMITIVE LIFE IN TENNESSEE—*N. C. R.*

Mountaineers living as their ancestors did a hundred years ago—sheep raising—log cabins—a spinning wheel—weaving—the flintlock and tinder box—home-made tallow candles.

TEXAS TRAIL TO YOUR TABLE—*Swift & Co., Union Stock Yards, Chicago, Ill.*

Life on a Texas cattle ranch—a packing plant.

TROPICAL GEMS OF FLORIDA—*N. C. R.*

A boat ride on one of the quiet streams of Florida—rare tropical scenes.

Canada

AMID ALPINE SNOWS—*Can. M. P.*

The Alpine Club of Canada climbing Mt. Robson, the highest peak of the Canadian Rockies—1368 feet above the snow.

ATHABASKA TRAIL, THE—*Can. M. P.*

Sir Arthur Conan Doyle's poem picturized—sub-titles are illustrated by beautiful and authentic views along the famous trail.

ALGONQUIN PARK—LAND OF 1000 LAKES—*N. C. R.*

A scenic travelogue of the Ontario Provincial Park.

CAMP FIRES AMONG SNOW PEAKS—*N. C. R.*

Up the Bow Valley into Yoho and finally into Wilcox Pass, showing how Alpinists at the top of the world made this ascent into territory hitherto unexplored.

CANADA'S MOUNTAIN OF TEARS—*N. C. R.*

The ascent of Mt. Edith Cavell, named in honor of England's martyred nurse. The snowy peak, glaciers of ice, the massive pine and spruce trees casting their shadows, make this a fitting monument.

CANADA'S NEW HIGHWAYS—*N. C. R.*

An argument for good roads with detailed scenes of modern road construction.

CANADA'S METROPOLIS, MONTREAL—*N. C. R.*

A travelogue of the city of Montreal—beautiful and historical.

CANADA'S FARTHEST NORTH CITY—EDMONTON—*N. C. R.*

Scenes in the provincial capital of Alberta.

CAPE BRETON, RANDOM GLIMPSES OF—*N. C. R.*

A little-known beauty spot, full of historic association—scenes in the rugged northern section of the island around Ingonish and the beautiful Bras d'Or Lake district.

DIGGING UP THE PAST—*Can. M. P.*

The badlands of the Red Deer Valley, Alberta, the most prolific field in the world for Palæontological research—how dinosaurs are located and secured—assembling the fossilized bones of prehistoric monsters at the Royal Victoria Museum, Ottawa.

DOWN NORTH—MACKENZIE RIVER DISTRICT—*N. C. R.*

The first motion picture ever made of the great Mackenzie River district.

FISHIN' TIME—NIPIGON RIVER—*N. C. R.*

The piscatorial art on the picturesque Nipigon River, noted for its scenic beauty.

FISHING PARSON, THE—*Can. M. P.*

The parson's fishing expedition—trip up the river—the catch—the return.

FOUR DAYS OPEN SEA—*Can. M. P.*

A transatlantic voyage from Quebec to Liverpool—scenes on board—the boiler room—the gymnasium—entertainment and amusements—submarine tennis and shuffle board—care for the kiddies—nearing Liverpool.

FRESH FROM THE DEEP—*Can. M. P.*

Showing the methods of catching halibut along the coast of British Columbia and Alaska—preparation of the fish at Prince Rupert, B. C., for shipment.

FARMING AND ASBESTOS MINING IN CANADA—*N. C. R.*

Fox fur farming—fur traders—Hudson Bay—cattle in Western Canada—cowboys riding and "busting" bronchos—irrigation dam at Bas-saco—irrigation of three million acres with five thousand miles of canals—asbestos mine at Thetford, Quebec.

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FRONTIERS OF THE NORTH—*From Quebec to Baffin Land, Part 1—Can. M. P.*

Dealing with the Canadian Government Arctic Expedition of 1922; included are views of the departure from Quebec, voyage through the northern ice floes, a polar bear hunt, killing an Arctic seal, typical Arctic scenery, and the Eskimos of Baffin Land.

GLIMPSES OF CANADA—*N. C. R.*

The St. John River—early French settlers—Corpus Christi festival—the Doukhobars or "Spirit Wrestlers."

GENTLEMEN CADETS (KINGSTON)—*N. C. R.*

Life and training at the Royal Military College at Kingston, Ontario.

GETTING CANADA'S GOAT—*Can. M. P. . . .*

Canada's wild goats, the sure-footed inhabitants of the Rockies—a trip up the mountain—the art of bread-making—sleeping bags—shooting a big one—bagging a mountain sheep on the Panther.

GEMS OF THE ROCKIES (JASPER PARK)—*N. C. R.*

The world's largest scenic playground, Jasper National Park, with its wonderful mountain scenery.

GLIMPSES OF TORONTO—*N. C. R.*

Dealing with the most interesting features of Canada's second greatest city, including views of the new harbour improvements and the Canadian National Exhibition.

GREAT LAKES ROMANCE—*Can. M. P.*

A little story of a boat trip through the upper Great Lakes—views of Windsor, Sarnia, Sault Ste. Marie, Ontario, Port Arthur, Kakabeka Falls, and St. Mary River.

HOW SALMON ARE CAUGHT—*Can. M. P.*

One of the films descriptive of Canada's extensive fisheries, and depicting the methods used in British Columbia coastal fisheries.

IN THE WAKE OF CAPT. COOK—*Can. M. P.*

An airplane trip to Nootka Sound on the northern Pacific coast of Canada, showing its inhabitants and the many queer features of life in a quaint Indian fishing village—totem poles, images, etc.

IN OLD FRENCH CANADA—*Can. M. P.*

The land of homespun—hand weaving—Beaupré and the Shrine of St. Anne—walls of Quebec—Château Frontenac—Plains of Abraham—Montmorency Falls.

LAKE OF HANGING GLACIERS—*Can. M. P.*

Excellent views of the glacier and other scenes along a pack trail in British Columbia—7000 feet up in the Canadian Selkirk Range—Glacial Cave, the source of the Columbia River.

LAKE LOUISE—THE MOST PICTURESQUE SPOT IN NORTH AMERICA—*Can. M. P.*

A beautiful scenic film showing the magic wonders of Lake Louise and vicinity.

LAST OF THE BISON, THE—*Can. M. P.*

The famous buffalo reservation at Wainwright, Alberta, showing an interesting experiment in buffalo-cattle breeding, whereby an entirely new domestic animal has been evolved.

LEAVES FROM A RANGER'S NOTEBOOK—*Can. M. P.*

The experiences of a Rocky Mountain Ranger in picturesque Jasper National Park.

MONARCHS OF THE PLAIN—*Can. M. P.*

A film visit to the Buffalo Park, Wainwright, Alberta, where the once nearly extinct buffalo, as well as yak, elk, and other wild life, still exist under government protection.

MOOSEBACK ON THE MIRAMCHI—*Can. M. P.*

Moose hunting in the vicinity of Lake Carson in New Brunswick—unusual photography showing the moose in their native haunts—the exciting sport of riding on the back of a moose.

MOTORING IN CLOUDLAND—*Can. M. P.*

A view of the Banff-Windermere highway, completing the link of the world's greatest motor route—the 4200-mile Grand Circle Tour of Canada and the United States. Glimpses of magnificent scenery and the wild life of the National Parks near Banff, Alberta.

MOUNTAINEERING MEMORIES—*Can. M. P.*

A trip from Banff to Mount Assiniboine—Canadian Rocky Mountain scenery.

NATURE'S ECHO—*N. C. R.*

Scenes of nature's masterpieces in the Canadian Rockies; Clear lakes reflecting the surrounding mountains—tumbling streams and waterfalls—winding paths and deep ravines—herds of roaming caribou and mountain goats.

ON THE SKEENA RIVER, MURRAY—*N. C. R.*

Salmon fisheries on the world's greatest salmon stream. One of the films descriptive of Canada's extensive fisheries—methods of catching and preparation of the fish.

QUEEN OF THE COAST—VANCOUVER, B. C.—*N. C. R.*

Scenes in Vancouver, B. C., and its environs. One of the most beautiful scenics ever produced.

PARTY ON THE ROOF OF THE WORLD—*Can. M. P.*

Up Mt. Assiniboine—preparing for the climb—wonderful scenes on the way and from the mountain top—return to camp.

PLAY DAY AT BANFF—*Can. M. P.*

Banff National Park—swimming—carnival—races—mountain-climbing—the Red Men at Banff.

PLAYGROUND OF A CONTINENT—*Can. M. P.*

The Muskoka Lakes region of Ontario, the noted summer resort district.

POLE PUSHERS OF PUGET SOUND—*Can. M. P.*

Views of labor and scenery in the northwest cedar industry.

POLICING THE ARCTIC—*Can. M. P. Part 2 of Frontiers of the North.*

Dealing with the Canadian Government Arctic Expedition of 1922—Canada's most northerly white settlement at Craig Harbour, Ellesmere Island—interesting glimpses of Eskimo life in this region.

REGION OF ROMANCE (LAKE OF BAYS DISTRICT)—*N. C. R.*

A film of the scenic beauties of water and land.

SUGAR MAPLE TREE HARVEST—*N. C. R.*

Life in the sugar bush—old and new methods of tapping maple trees—gathering sap—transporting it to the kettles—finally a real old-fashioned sugar-bush party.

STORY OF A CAN OF SALMON—*Can. M. P.*

Depicting in an interesting and non-technical manner how salmon is canned in the great canneries of British Columbia—every step in the process from delivering the catch of the cannery to the completed product is graphically shown.

STUDENT LIFE IN CANADA—*Can. M. P.*

McGill University at Montreal—McDonnell Engineering Building—student dental clinic—testing cable—college blacksmith and mining students—"Liquid Air" in physics laboratory—Royal Victoria College and the training of the maids of Canada.

THOROUGHBREDS (HORSES)—*N. C. R.*

Horse breeding in Canada, including beautiful scenes of the upper Gatineau Lake District of Quebec; an exciting point to point race.

THROUGH THE NORWAY OF AMERICA—*Can. M. P.*

A trip on a Grand Trunk Pacific steamer from Vancouver to Prince Rupert.

TOP O'WORLD—*Can. M. P.*

The Jasper Park region in the vicinity of Mount Robson.

TRAIL RIDERS OF THE CANADIAN ROCKIES—*Can. M. P.*

A horseback expedition over the Wolverine Pass—the Kootenay River—Mount Goodsir—Tumbling Glacier—Moose Creek—Lake McArthur—Lake O'Hara.

VALLEY OF 100 PEAKS—JASPER PARK—*N. C. R.*

Jasper Park in the Canadian Rockies—one of the National Parks of the Dominion.

WATER POWERS OF CANADA—*N. C. R.*

Detailed views of the city of Winnipeg and the future water-power possibilities on the streams of this vicinity.

WHERE THE MOOSE RUN LOOSE—*Can. M. P.*

Some extraordinary action pictures of moose in New Brunswick.

WHERE SALMON LEAP—*Can. M. P.*

Salmon fishing—a trip up the famous Restigouche River in northern New Brunswick—a splendid sporting picture.

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WILD WESTING DE LUXE—*Can. M. P.*

Ranch life, work and play—the coral—broncho busting—tricks with the lasso—trout fishing and other recreations.

WITH GUN AND DOG—*N. C. R.*

The experiences of a party of sportsmen on a deer-hunting trip in the Laurentian hill district adjacent to the city of Ottawa.

WITH ROD AND FLY—*N. C. R.*

Of interest to followers of Izaak Walton—a somewhat humorous depiction of the experiences of a party of fishing enthusiasts on one of the lakes in the Upper Gatineau River district.

WHERE BEAUTY DWELLS—*N. C. R.*

Scenes in Jasper National Park—the famous Maligne Trail—Medicine Lake—and Maligne Lake. One of the most wonderful parks in the Canadian Rockies.

Central America

BETWEEN FRIENDS—MEXICO AND TEXAS—*N. C. R.*

Views of industrial and historical places in El Paso, Texas—the International Bridge into Mexico—customs house and old historical buildings of Juarez.

MEXICO, CENTRAL AMERICA AND PANAMA—*N. C. R.*

A garden near the city of Mexico—Guadalupe Hidalgo, Central America—Balsamwood—the River Dulce—the City of Panama—the Bull Ring.

SOUTH AMERICA

LIMA, PERU—*N. C. R.*

Views of the city of Lima, the capital—the convent of St. Theresa—the St. Augustine convent—the Peruvian House of Congress.

RIO, THE BEAUTIFUL—*U. S. Navy Department, Washington, D. C.*

Beauty and progress in Rio de Janeiro.

WEST INDIES

ATLANTIC FLEET IN THE WEST INDIES—*U. S. Navy.*

A tour of the West Indies with the ships of Uncle Sam.

BERMUDA—*N. C. R.*

Hamilton, the capital city—the Devil's Hole—the home of Tom Moore, the Irish poet—St. George, the oldest settlement of Bermuda—a yachting regatta.

NASSAU—*N. C. R.*

Interesting scenes of the buildings, inhabitants, and historical places of this city in the Bahama Islands.

TRIP TO THE WEST INDIES, A—*N. C. R.*

St. Croix—Porto Rico—Roseau, capital of Dominico—Bridgetown—the Windward Islands—the sugar industry.

OTHER ISLANDS

LAND OF THE UKULELE—HAWAII—*N. C. R.*

Ocean trip to the crossroads of the Pacific, Hawaii—places of beauty and interest in and around the city of Honolulu.

EUROPE

AUSTRIA—*N. C. R.*

Budapest, the twin city on both banks of the Danube—public buildings—mineral springs and baths—Stalzburg, the Alpine mountain city—a party of hikers in the Alps—a holiday festival.

BAVARIA—*N. C. R.*

Stromberg Lake and the mountain country—a winter festival—curling—ski jumping, and running.

BRITTANY AND THE MEDITERRANEAN COAST OF FRANCE—*N. C. R.*

Scenes in Brittany; charming old towns along the Mediterranean coast.

CARRYING OLD GLORY TO THE SEVEN SEAS—*Department of Instruction, University of California, Berkeley, Calif.*

A comparison of a modern steamer with Fulton's first boat, the *Clermont*—the great progress American shipping has made since the day of that invention and the impetus given our commerce by the war.

EMERALD ISLE, THE—*N. C. R.*

Rural scenes in southern Ireland; castles and lakes—Blarney Castle

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—the ancient custom of kissing the Blarney Stone—the Lakes of Killarney; a rural Irish funeral.

IRELAND—THE ISLE OF MAN—*N. C. R.*

The northwest coast of Ireland—the fishing industry—digging peat.

PARIS—*N. C. R.*

Buildings—palaces—churches—monuments—bridges—boulevards—gardens—parks—the arch of triumph—the River Seine—the Cathedral of Notre Dame.

PARIS AND ALSACE-LORRAINE—*N. C. R.*

The Montmatre section of Paris—Strassburg, the capital of Alsace-Lorraine.

ROME, VENICE AND VESUVIOUS—*N. C. R.*

Verona and Pisa—the famous leaning tower—Naples and Vesuvius—Rome—St. Peter's—the Castle of St. Angelo—the Coliseum—Venice—the Grand Canal—the Rialto Bridge—St. Marks Cathedral—the Bridge of Sighs.

SCOTLAND AND WALES—*N. C. R.*

The River Dee—the world's longest span bridge—farming in Scotland—the canals of Scotland—the beach in Wales.

TIVOLI AND SICILY—*N. C. R.*

The famous Carrara Marble Quarries—Tivoli, one of the most fascinating Italian towns—Sicily, the gem of the Mediterranean—ancient ruins at Syracuse.

TUSCANY AND LAKE COMO—*N. C. R.*

Old towns and villages in the Province of Tuscany—Lake Como.

VERSAILLES—*N. C. R.*

The royal dwelling-place of the French kings—the palace—the gardens and fountains—the magnificent palace was the scene of the peace treaty after the World War.

VILLAGE LIFE IN SWITZERLAND—*N. C. R.*

Appenzell, the old town in the mountains of Switzerland—primitive lace-making—the lakes—mountain towns built on the side of cliffs.

WHEN WINTER COMES IN NORWAY AND RUSSIA—*N. C. R.*

Ice boats—winter scenery in Norway—home life in winter—the ice harvest—soldiers on skis—North Russia—the midnight sun.

ASIA**CAIRO AND JERUSALEM—*N. C. R.***

The streets of Cairo—drill of the fire fighters—the Nile—ancient tombs of the Egyptian rulers—the Sphinx and the Pyramids—the Sahara Desert—Jerusalem as it appears today.

CHERRY BLOSSOM TIME (JAPAN)—*N. C. R.*

The great annual festival—decorated cities—processions carrying the great dragon to dispel evil—picturesque scenes and crowds—the Geisha Girls entertaining the revelers.

FLOATING CITIES OF CHINA—*N. C. R.*

Hankow on the Yangtze Kiang River—thousands of floating homes on the river—Canton river life—the Samoan Islands—native huts—water sports—the cocoanut industry.

GLIMPSES OF INDIA—*N. C. R.*

The Ganges River—the Nautch Dancers—bathing festival among the Hindus.

JAPANESE FESTIVALS—*N. C. R.*

Streets of Yokohama—public parks and playgrounds—the Kite Festival—the Rice Festival—the Acrobatic Open Air Festival.

KOREA—*N. C. R.*

Sondo, the one-time capital—scenes of the natives—the fishing colonies—a Korean wedding—raising ginseng—the Temple of Heaven—the rice industry.

NATIVE SCENES IN JAPAN—*N. C. R.*

Peculiar traffic regulations—home life of natives—the Temples of Mizusawa—a visit to the Japanese warship Izuma.

TEMPLE BELLS AND WAYSIDE SHRINES (JAPAN)—*N. C. R.*

Tokio, Japan—Temple of Asakusa—a water festival—the temple at Nara—the sacred deer—the festival of Gion—the pilgrimage to Mt. Fuji—the great Bronze Buddha.

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TYPES OF NATIVES OF INDIA—*N. C. R.*

Natives at work on Ceylon tea plantations—Kandy—the rickshaw men—native troops.

AFRICA

NORTHERN AFRICA—*N. C. R.*

Morocco—quaint old villages—native types—Moorish palaces—Algiers, capital and chief port—Tunis—native life.

OLD AND MODERN DEVICES—EGYPT TO NOW—*N. C. R.*

Slot machines originated in Egypt over 2000 years ago—progress of means of private transportation, from phaeton to motorear, from high bicycle to motorcycle.

MOROCCO—*N. C. R.*

Fez, the capital city—types of natives—street scenes; primitive irrigation.

History—United States

A PILGRIMAGE (NEW ENGLAND)—*N. C. R.*

A visit to Plymouth, Newport and Provincetown—interesting and historical places—Plymouth Rock—Pilgrim Hall—home of John Winslow—the first street in New England—Pilgrim's Monument.

OLD SANTA FÉ—*U. S. Ag.*

The gateway to the Santa Fé National Forest—points of historic interest in Old Santa Fé.

OLD NEW ENGLAND—*N. C. R.*

Old New England with its quaint villages and cities—beautiful landscapes and old battlefields—points of interest in Boston.

PATRIOTIC SERVICE—*At Patterson School, Dayton, Ohio.* *3 reels—N. C. R.*

The pageant as given for a number of years in the school auditorium—a beautiful, patriotic, historical pageant in costume—the titles present the words of the songs and the dialogue—considered one of the best pageants ever produced in a public school.

QUEEN OF THE WAVES—2 reels—G. E.

Tells the story of American navigation from the time the primitive inhabitants paddled on logs or constructed crude rafts—a bark canoe—Christopher Columbus and the Santa Maria—Henry Hudson and the Half Moon—the treadmill-driven ferry and Robert Fulton's steam-driven Clermont—launching of the Queen of the Waves, the latest and greatest battleship.

WARDS OF A NATION (INDIANS)—N. C. R.

The Indians as wards of the United States—looking after their spiritual, as well as mental and physical welfare. This film gives a good idea of what our government is doing to make them desirable citizens.

Nature Study—Zoölogy**ALLIGATOR HUNT, AN—N. C. R.**

The haunts of the alligator in the Everglades, west from Palm Beach—the finding of a nest of alligator eggs—a thrilling fight with and capture of a large alligator.

ARISTOCRACY—(BIRDS)—4 reels—N. C. R.

Many species of the feathered tribe—parent birds and young. Great patience and care were exercised to obtain these intimate and natural studies.

BIRD CITY, A—DOMINION PARKS BRANCH; *Department of the Interior, Canada.*

A novel bird film taken at the bird sanctuary near Moose Jaw, Sask. The gull, heron, tern, and many other birds are shown in their everyday life, nesting, mating, swimming, and flying.

CIRCUS DAY—N. C. R.

An interesting depiction of circus life—unloading of the circus—pitching of tents—the parade and clowns.

CINCINNATI ZOO—3 reels—N. C. R.

An exceedingly interesting and educational film on animals—shows a great many of the more unusual animals and their habits.

GOD'S HANDIWORK—N. C. R.

Visitors leaving a mountain inn on horses—beautiful views of moun-

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tain forests, lakes, ravines, cataracts—large herds of caribou—the marvelous leaps of the mountain goats.

HARVEST OF THE SEA—*Y. M. C. A.*

An informative study of the salmon fishing industry, including the catch and the canning.

HOW PLANTS ARE BORN, LIVE AND DIE—*N. C. R.*

In twelve minutes we see plants grow from the seed to their full bloom, then wither and die. It took many days to make these pictures of this slow and gradual process.

KEEPING BEES AT WORK—*U. S. A.*

Improved methods of bee management—how to control diseases of the brood—a technical picture for bee-keepers.

LEATHER TREAD, THE—*International Shoe Co., 1619 Washington Ave., St. Louis, Mo.*

Processes in the manufacture of a shoe from the tanning of the hides to the display of the finished product.

LITTLE DROPS OF WATER—*N. C. R.*

A microscopic study of the contents of a drop of water, showing clearly the bacteria. The latter portion of the reel contains other scientific experiments.

MAKE MORE FROM YOUR POULTRY—*International Harvester Co., Extension Department, 616 S. Michigan Ave., Chicago, Ill.*

A popular and scientific study of poultry production from the standpoint of profit to the small producer.

MILK—*Carnation Milk Co., Oconomowoc, Wis.*

A preliminary discussion of the food value of milk—the cattle are shown in the pasture and in modern barns—milk undergoing the processes of evaporation, canning, sterilizing, and shipping. Animated diagrams play a large part in this picture and add to its interest and educational value.

STARTING LIFE—*N. C. R.*

Quaint study of the young animals, including sheep, turkeys, pheasants, rabbits, kangaroos, etc.

WHAT A CARELESS HUNTER CAN DO—*U. S. Ag.*

A forest fire is started by a careless hunter—methods of government fire fighters—the destruction of a town by the fire.

Language and Literature**JOHN GREENLEAF WHITTIER—*N. C. R.***

His birthplace at Haverhill, Massachusetts—his home at Amesbury—the poem of "The Barefoot Boy" illustrated—the poem "Maud Muller."

HENRY WADSWORTH LONGFELLOW—*N. C. R.*

His birthplace at Portland, Maine—his home at Cambridge, Massachusetts—"The Village Blacksmith" illustrated—"The Psalm of Life."

Vocational Studies**DOMESTIC SCIENCE****APPLE OF NEW ENGLAND, THE—*National Motion Picture Bureau, Bedford, Mass.***

Covers a number of subjects, including the grafting and raising of apple trees.

APPLES AND GRANITE—*N. C. R.*

The apple industry and granite quarries of New England. The coast at Narragansett, R. I.—a trip with a haddock fishboat—a granite quarry in Vermont—apple-picking time.

APPLE AND FISH INDUSTRIES—*N. C. R.*

The Apple and Fish Industries of Oregon. Shooting the rapids by barge—the apple industry—the opening of the salmon season—the Bonnaville fish hatchery—fishing for smelt.

BAKING BETTER BREAD—*Washburn Crosby Co., Minneapolis, Minn.*

For the housewife to further better bread-baking—also of general interest.

BAKERY AND CANDY—*N. C. R.*

A pretzel factory—making confection cakes by machinery—whole-wheat bread—candy made from cactus plants.

BEETS FROM SEED TO SUGAR BOWL—*U. S. Ag.*

Various steps in the culture of sugar beets from the pre-planting preparations of the soil to the harvesting of the beets—process of manufacture of beet sugar.

BEHIND THE BREAKFAST PLATE—*U. S. Ag.*

The complete story of the preparation of bacon by modern methods—curing of bacon by early colonial methods—evolution of the hog business.

BUBBLES—MANUFACTURING OF SOAP—*N. C. R.*

The processes and automatic machines used in the manufacture of toilet and laundry soap.

BETTER WAY OF MILKING—*DeLaval Separator Co., 1709 Heyworth Bldg., Chicago, Ill.*

Gland action and formation of milk in the cow's udder—operation of a milking machine shown in detail by animated technical diagrams—comparison of hand and machine methods of milking.

CANNING BY THE COLD PACK METHOD—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

Describing the cold pack process of preserving fruits, vegetables, and meats.

CHEESE MANUFACTURE—*Armour & Company, Union Stock Yards, Chicago, Ill.*

The cheese industry from source through manufacture to shipment. The food value of cheese is carefully explained and the picture as a whole is of considerable educational value.

CITROUS FRUITS AND FRUIT DROPS—*Y. M. C. A.*

Contains some especially attractive scenes in color—the growing of orange and lemon trees—irrigation of the orchards—other views of the cultivation and shipping of the fruit—a Beechnut educational production with very little advertising.

CONCERNING CHEESE—*Armour & Company; Union Stock Yards, Chicago, Ill.*

Complete process of manufacture of cheese, with close-up scenes showing each operation—world's largest cheese factory—palatable dishes from cheese.

CRANBERRIES—*U. S. Ag.*

The culture of cranberries and how to overcome the disease that makes them bitter—the Puritans receiving the berries from the Indians.

CURED BY CANNING—*U. S. Ag.*

A Middle West rural community is cured of illness and idleness by the first mother-daughter canning club, which preserved and canned foods formerly wasted.

DATES, AMERICA'S NEWEST CROP—*U. S. Ag.*

How date gardens have been made of the Southwestern desert land by means of irrigation—scientific methods and management—date culture and insect control—the government assistance furnished the new industry.

DATES FROM THE GARDEN OF EDEN—*Hill Bros. Co., Hill & Washington Sts., New York City.*

Views of the probable geographical location of the Garden of Eden at the junction of the Tigris and Euphrates Rivers—date growing as carried on in this famous valley in Mesopotamia is exhibited—the “Muharram,” picturesque procession of the Mohammedans, is included in the reel—the packing and shipping of dates—a definitely educational subject.

DRYING FRUITS AND VEGETABLES IN THE HOME—*U. S. Ag.*

Methods of drying, packing, conditioning, and labeling tomatoes, carrots, and other root vegetables, corn, berries, and apples—types of driers—a luncheon of dried foods which was attended by the wives of cabinet officers.

ETIQUETTE—IN PUBLIC PLACES AND THE HOME—*N. C. R.*

Of general interest and for domestic science classes.

ETIQUETTE—TABLE MANNERS—*N. C. R.*

Of general interest and for domestic science classes.

FOOD FOR REFLECTION—*2 reels—U. S. Ag.*

Based on the idea that “children are the best crop the farm produces”—how the women of the community met the need for a hot school lunch at Pleasant View—raising the money and installation of equipment—beneficial results of the hot lunch for school children—weighing and measuring demonstrations.

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FRESH FISH—CAN IT— $\frac{1}{2}$ reel—*U. S. Ag.*

Freshly caught fish are canned in a steam-pressure cooker on the banks of the stream—taking the canner to the fish is the best method.

GOLDEN GIFT, THE—ORANGES—*Leggett.*

The old legend of the fleet-footed Grecian Maiden, Atalanta, and the Golden Apples, serves as an introduction to the story of the orange industry of California. This is a Castle colored film.

HOUSEHOLD HINTS—*N. C. R.*

Preparing a boiled dinner—a new kind of milk bottle—an ostrich egg omelet—how to economize on coal. Of interest to housewives and others.

HISTORY OF SPICE—*Leggett.*

Showing the importance of spice in the development of the old trade routes and the discovery of new countries.

IN FOR A RAISE—BAKING POWDER AND MACARONI—*N. C. R.*

The manufacture of baking powder and macaroni.

KEEPING OUT BAD FOOD—*N. C. R. or U. S. Ag.*

Inspection of imported food products under the food and drugs act to protect Americans from fraudulent and unwholesome articles—inspections of tea.

MATTER OF FORM—*U. S. Ag.*

The assistance the home demonstration agent gives the farm women in doing their own sewing—another of the Government's films on the Pleasant View community.

MILK, NATURE'S PERFECT FOOD—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

One of the best reels to show the value of milk as a healthful food—approved methods of sterilizing—storing and shipping milk.

NEW ENGLAND CLAMBAKE AND COUNTY FAIR—*N. C. R.*

Catching herrings by the thousand—a New England Clambake—the County Fair—views of the Sunken Gardens at Bridgeport, Conn.

OUR DAILY BREAD—*G. E.*

The evolution of our wheat industry—the development of the machinery of harvesting, threshing, milling and baking. Begins in each

case with the primitive and concludes with the most modern apparatus in use.

PEARL BUTTONS AND IVORY—*N. C. R.*

The manufacture of ivory articles from elephant tusks—the production of celluloid buttons; from sea shells to pearl buttons.

PEANUTS—*Leggett.*

The peanut crop in Virginia and the Carolinas—the special methods used in planting, harvesting, and delivering this interesting product.

PLEASE PASS THE CRANBERRIES—*Atlantic Film Co., 727A
Boylston St., Boston, Mass.*

The world's greatest cranberry bogs—preparation of the soil—setting the vines—irrigating and pruning—after four years the first crop is ready—harvesting—screening and sorting—the finest berries for the table.

PLAYTHINGS OF CHILDHOOD—*N. C. R.*

This interesting film shows the making and dressing of dolls, the manufacture of toy pianos and other toys.

RICE INDUSTRY—*Harcot Motion Picture Industries, Inc., New
Orleans, La.*

Planting of rice—flooding of field—young growth—cutting, shocking, threshing—hulling and polishing processes—the master recipe for cooking rice.

ROMANCE OF THE LEMON—*California Fruit Growers Ex-
change, Advertising Dept., Los Angeles, Cal.*

A reel produced by the California Fruit Growers Exchange, showing the beautiful lemon tree groves in California, with methods of cultivation, harvesting, and shipment.

SECRET OF SUNSHINE—*Loose Wiles Biscuit Co., 811 Com-
merce Bldg., Kansas City, Mo.*

Processes of manufacture of fancy and wholesale cookies and small cakes. Close-ups show each operation.

SIR LACTEUS—GOOD MILK KNIGHT—*2 reels—U. S. Ag.*

A fanciful story to impress upon children the importance of milk in

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the diet. Sir Lacteus and his assistants battle with Sir Disease for a little girl whom the latter has kidnapped.

STORY OF THE PURE FOOD, THE—*Armour & Company, Union Stock Yards, Chicago, Ill.*

Process of manufacture of oleomargarine.

TALK OF THE TOWN, THE—*Worcester Baking Co., Mason St., Worcester, Mass.*

(Designed for local distribution only. Special arrangement will be necessary for outside circulation.) One of the best presentations of the technic of the modern bakery. The attempt to interweave a love story does not help the film for classroom presentation.

SWISS CHEESE—MADE IN AMERICA—*U. S. Ag.*

Grove City Pennsylvania Creamery, which is operated by the Government—processes of making cheese which was formerly largely imported.

TO A QUEEN'S TASTE—CANDY FACTORY—*N. C. R.*

The manufacture of several different kinds of candy is shown in an interesting manner, and the reel closes with the making of a candy basket with floral decorations.

WICKERWARE—*N. C. R.*

The interesting processes in the manufacture of wicker furniture are shown from beginning to end.

AGRICULTURE

APPLES AND THE COUNTY AGENT—*U. S. Ag.*

The agricultural extension service introduces modern methods in the production and marketing of apples, thereby helping an unsuccessful farmer to become progressive and prosperous.

ALFALFA WEEVIL CONTROL—*U. S. Ag.*

The great national value of alfalfa and the tremendous loss through the alfalfa weevil in some of the Western States. Methods of control.

AGRICULTURE—BROOM CORN, ONIONS, HOPS, ARTICHOKE AND ALMONDS—*N. C. R.*

Making brooms—an onion farm in New Jersey—hop gardens in Holland—the artichoke from field to table—almonds from tree to nut sundae.

BANANA, THE—*N. C. R.*

The banana plantations in Jamaica—bringing in the fruit—loading the vessel—the unloading and distribution in an American port.

BARBAROUS BARBERRY—1 reel—*U. S. Ag.*

An animated cartoon showing the common barberry, the cause of wheat rust—science magnifies the rust germs and explains cause and effect. Of special interest in wheat-growing districts.

BATTLE AGAINST BLACK STEM RUST, THE—*Conference for the Prevention of Grain Rust, 150 Knight Building, Minneapolis, Minn.*

The origin of black stem rust, the terror of the grain fields, on the common barberry bush—microscopic views of the germ at work—United States assistance in eradicating the barberry by poisoning and uprooting—experiment with rust-proof wheat.

HOG BREEDS AND HOG MANAGEMENT—*U. S. Ag.*

Examples of hog aristocracy in the United States, with scenes showing the extent of the swine industry.

BUNCH OF SHEEP ON EVERY FARM, A—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

A clear and vivid picturization of the sheep industry from grazing in the pasture to the finished wool product—excellent suggestions regarding the care of sheep and handling of the wool.

CHARGE OF THE TICK BRIGADE— $\frac{1}{2}$ reel—*U. S. Ag.*

An animated cartoon, in which the ticks thank cattle owners for their neglect of cattle dipping—scenes of cattle attacked by the fever tick—the resultant mortalities. Of interest to cattle owners, especially in the south.

CLUB CHAMPIONS AT CAMP VAIL—*U. S. Ag.*

A day at a Boys' and Girls' Club encampment held in connection with an interstate fair, featuring exhibits, demonstrations and judging contests.

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CONSTRUCTION OF A CONCRETE SILO—*U. S. Ag.*

Showing the various steps in the building of a concrete silo, outlining the practicability of building a concrete silo with the labor available on the farm.

CO-OPERATIVE MARKETING—TOBACCO—2 reels—*U. S. Ag.*

Photographed in North Carolina, Virginia, and Kentucky, outlining the methods followed by co-operative marketing associations.

COTTON GINNING AND MARKETING—*U. S. Ag.*

Delivering the seed cotton at the gin—the processes of ginning—preparation for the mill—baling—grades and types of cotton and bales.

COTTON—DIXIE'S GREATEST CROP—*U. S. Ag.*

The new era in cotton production—pre-planting preparations—planting—cultivation—picking and delivering at the gin—problems of the modern cotton grower, including the boll-weevil.

COTTON'S WORST ENEMY, THE PINK BOLL-WORM—*U. S. Ag.*

10,000 infested areas in Texas are cleaned, under the direction of the Federal Horticultural Board—sweeping of fields and burning of plants—the fumigation of imported cotton—the difference between the pink boll-worm and the boll-weevil.

DANGEROUS INVADERS—GYPSY AND BROWN-TAIL MOTHS—*U. S. Ag.*

This reel tells how the gypsy and brown-tail Moths gained a foothold in New England—the damage they do to trees—methods to control them as used in the fight by the Federal and state authorities.

DYNAMITE—CONCENTRATED POWER—*U. S. Ag.*

Farm uses of dynamite in blowing out stumps, breaking and removing boulders, and blasting ditches. The proper methods for its use and precautions to be taken against accidents.

FARM INCONVENIENCES—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

Pictures in an interesting way the result of carelessness on the farm.

FIGHTING WESTERN PINE BEETLES—*U. S. Ag.*

The devastation of great forests by these insects as compared with loss

by forest fires—how they destroy valuable timber—methods of control recommended by government entomologists.

FORESTS GREEN OR GRAY—*U. S. Ag.*

The uses of the national forests for the present and future generations—how campers, hikers, tourists can protect them from destruction by fire.

HELPING NEGROES FARM—*2 reels—U. S. Ag.*

Showing the beginning of the work of the agricultural extension service among the negro farmers of the South and their families, benefits effected, and operation today.

HIGH STEPPERS—HORSES—*U. S. Ag.*

Types of light horses for saddle and driving, that won prizes at a horse show in an Eastern city.

HORN FLIES, PESTS OF CATTLE—*U. S. Ag.*

Means of preventing the breeding of horn flies, thereby reducing the harm done by their attacks on cattle—methods of control used in the southwestern states.

HOW AND WHY OF SPUDS—*U. S. Ag.*

The production of the American potato, which is second only to wheat as a human food—modern methods and machinery in Aroostook County, Maine.

HOW TO POISON BOLL-WEEVILS—*U. S. Ag.*

A lecturer explains the proper methods of poisoning cotton to control the boll-weevil—various types of poisoning machinery—the calcium arsenate method—methods of application—tests of poisoning material.

IN THE WAKE OF THE STORM—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

Scenes in Southern Illinois and Northern Indiana following the great tornado in March of 1925—views of destroyed villages, orchards, farms—the wreckage of the coal mines, power lines, and means of communication such as telegraph, telephone, and railroad—temporary hospitals and relief stations—beginning the work of reconstruction—rebuilding of the towns and cultivation on the farms.

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JOHNATHAN BARR'S CONVERSATION—(*Milk Testing*)—*Holstein-Frisian Association, 230 E. Ohio & Homestead Films, 732 S. Wabash., Chicago, Ill.*

An unusually good example of the use of the story method to present useful information—the operation of the Babcock milk test—the improved methods of milk weighing—the building up of high-grade herds through the use of pure-bred bulls—need and method of organization of cow-testing organizations. A nominal service charge is made for the use of this film.

KING APPLE'S ENEMIES—*U. S. Ag.*

Insects and fungi that attack the "king of fruits"—their defeat through the use of various types of spraying and dusting apparatus.

LAMBS FROM RANGE TO MARKET—*U. S. Ag.*

Ewes and lambs grazing on national forests—lambs separated from ewes at the end of season and taking to feeding yards for fattening—fattening of lambs and loading for market.

LAND OF COTTON—*2 reels—G. E.*

An unusually interesting story of a great industry from the planting of the seed to the finished cloth. The film was made at the largest cotton plantation, the largest cotton terminal and one of the largest textile mills in the world.

LAYERS AND LIARS—POULTRY—*U. S. Ag.*

Again this department uses the story of the community of Pleasant View to teach its lesson—culling and other good poultry practices are explained—community canning of the culls.

MAKING A STAR-HAM—*Armour & Company, Union Stock Yards, Chicago, Ill.*

In an interesting portrayal of the production of ham, this reel also shows the magnitude of the packing industry.

MILK-MADE PRODUCTS—*2 reels—U. S. Ag.*

Laboratory and factory means of making dairy products, as developed by the Dairy Division of the Department of Agriculture.

OUT OF THE SHADOWS—*2 reels—U. S. Ag.*

An unusually good argument for tested cattle is advanced in the

story of the farmer whose daughter contracts tuberculosis from the milk of his tuberculous herd.

OX WARBLE, THE—*U. S. Ag.*

The government service is called upon to assist in the extermination of the ox warble which has cut down milk production—methods used in combating this pest of American cattle.

PINES THAT COME BACK—*U. S. Ag.*

How timber can be made a profitable crop on ground unfit for other agricultural purposes—good forestry practices and uses of timber.

POOR MRS. JONES—4 reels—*U. S. Ag.*

A short drama which outlines the advantages of country life as compared with that of the usual small city flat.

PLANT DISEASE, A, AND HOW IT SPREADS. *U. S. Ag.*

The microscope is used in this film in the study of rhubarb blight to show the workings of the minute organisms that cause plant diseases.

POTATOES—EARLY AND LATE—*U. S. Ag.*

This film tells how the potato, which is commonly called "Irish," acquired this designation, although it is entirely an American product and was unknown until the discovery of the Western Hemisphere—methods of cultivation and harvesting of early and late potatoes in the great potato districts in Virginia and New Jersey.

POULTRY FARMING—*N. C. R.*

This film deals with up-to-date poultry farming—trap-door nests—young chicks—fancy roosters—sending baby chicks by parcel post—duck farming by scientific methods—turkey farming.

POULTRY PESTS, AND THEIR CONTROL—*U. S. Ag.*

Showing poultry infested with mites, fowl ticks, chiggers, and poultry lice, and the approved methods of control.

POWER BEHIND THE ORANGE—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

A brief picture story of the orange during cultivation, irrigation, and fumigation—the ripened fruit and methods of shipment.

POWER FARMER, THE—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

This reel deals with the question of horse or gasoline power on the farm—a day in the field and barnyard with a modern tractor.

PRODUCTION'S PULSE—*U. S. Ag., and International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

A film of unusual interest showing how the Government crop reports are made by 215,000 crop reporters and how they are released to the public, placing the farmer on a par with the speculator in farm products. The crop report is followed from the field to the newspaper.

PROFITS FROM CULL ORANGES AND LEMONS—*U. S. Ag.*

The former great loss to the citrous fruit industry from waste cull fruit—research work to develop uses for culls—the by-product plants, the balance wheel of the industry, to minimize the loss.

RED ENEMY—FIRE—*U. S. Ag.*

The story of a tree which after years of growth was destroyed by fire, caused by a careless rancher—a camping party trapped in the burning forest and their escape—lumbering, paper mills, and other industries depending on our national forests—fire fighting and airplane fire patrol.

SAFEGUARDING CITROUS FRUITS—*U. S. Ag.*

Fumigation of citrous fruit trees in southern California—methods used in preventing damage to orange and lemon trees.

SCHOOL DAYS—*International Harvester Co., 606 S. Michigan Ave., Chicago, Ill.*

Story of modern rural education.

SCREW WORMS—HOW TO FIGHT THEM—*U. S. Ag.*

Methods of fighting the screw worm fly as used in the southwestern states.

SELECTING A LAYING HEN—*U. S. Ag.*

Culling the flock—physical characteristics by which the good egg producer can be recognized.

STABLE FLIES—*U. S. Ag.*

The story of the harmful and annoying insect which appears in many

parts of the United States—methods of protecting animals from them and prevention of their breeding.

STORY OF WHITE PINE, THE—*U. S. Ag.*

Eastern white pine from virgin forest to finished products—second growth—nursery planting—the European disease, white pine blister rust.

STRAWBERRIES FROM FIELD TO SHORTCAKE—*U. S. Ag.*

Cultivation of the plants—picking, sorting, and methods of handling from field to market.

SUGAR CANE AND CANE SUGAR—*U. S. Ag.*

Cultivation and harvesting of sugar cane in the South—hauling to the factory—various operations in the manufacture and refinement of sugar.

SUGAR TRAIL, THE—*G. E.*

This film shows the wild beet and the methods used to bring it under cultivation—the modern methods of growth, harvesting, and manufacture into sugar.

SWEET POTATOES FROM SEED TO STORAGE—*U. S. Ag.*

Approved methods, as recommended by the Government, for the cultivation of the sweet potato and necessary precautions against disease.

TIMBERLUST—REFORESTATION—*N. C. R.*

The necessity of reforestation and methods in use at the present time—interesting scenes from a lumber camp.

TO MARKET, TO MARKET—*U. S. Ag.*

An argument for personal buying on the part of the housewife—types of public markets and the economies which can be effected by shopping with the market basket instead of the telephone.

UNCLE SAM, CHAMPION FARMER—*U. S. Ag.*

Scenes showing the great crop, fruit and livestock industries of the United States, including cotton, wheat, corn, potatoes, apples, dates, citrous fruits, poultry, dairy and beef cattle, hogs, horses, mules, and sheep.

UNDESIRABLE ALIEN, AN—*U. S. Ag.*

This film shows how the European corn borer became established in New England—damage to corn and truck crops in Massachusetts and the fight to control.

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UNHOOKING THE HOOKWORM—*Bu. Mines.*

This film depicts the methods by which the hookworms enter the human body and the simple and effective methods of cure and prevention.

WESTERN CANTALOUPE INDUSTRY—*U. S. Ag.*

Methods of harvesting and marketing cantaloupes in the melon-growing Turlock and Imperial Valleys in California.

WHEAT—BULK HANDLING—*U. S. Ag.*

Showing the rapidity with which great quantities of grain can be handled by this new and more economical method—the vastness of the operations.

WHEAT GRADING—*U. S. Ag.*

Tests of wheat under Government supervision.

WHEAT—SACK HANDLING—*U. S. Ag.*

Various steps in handling sacked grain in the Pacific Northwest.

WHERE UNCLE SAM RAISES POULTRY—*U. S. Ag.*

Scenes showing the improved methods of handling poultry as used on the Department of Agriculture poultry farm near Washington—brooders, pens, houses, use of trap-nests, etc.

YEAR WITH THE FLOCK, A—SHEEP—*U. S. Ag.*

Showing the care of sheep throughout the year—selection of pure-bred ram and good grade ewes in the fall—winter management—the shepherd's spring duties, docking, shearing, dipping—sheep on summer pasture.

MANUFACTURING

Automobiles

ACHIEVING QUANTITY PRODUCTION—*Buick Motor Co., Flint, Mich.*

An automobile in the making—the trip through the laboratories and foundries shows the various operations—animated diagrams explain automotive principles.

ELECTRICITY IN THE MOTOR CAR—8 reels—*Northeast Electric Co., Rochester, N. Y.*

A highly technical and, at the same time, popular educational exposition of the various applications of electricity to automobiles and trucks. All the latest devices used for instruction purposes with the motion picture are employed in this series of films: animated drawings, X-ray or phantom views, and greatly enlarged close-ups.

This combination of devices results in the student being able to see operations of the mechanism and movements of parts that he could not see in the real object or even in the factory itself. The subjects are as follows:

No. 1—Electricity in the Motor Car (1 Reel)

No. 2—How the Generator Works and Why the Starting Motor Starts (2 Reels)

No. 3—One for Two: The Starter-Generator (1 Reel)

No. 4—The Burning Question: Ignition (2 Reels)

* No. 5—The Electric Starter and Generating System in the Motor Car (1 Reel)

* No. 6—Ignition (1 Reel)

* Note: Subjects No. 5 and No. 6 are condensations of the entire six reels and are more suited for general audiences than for classes in mechanics.

FLIGHT OF THE GREY GOOSE—*Wills-Sainte Claire Co., Marysville, Mich.*

Interesting points in the manufacture and testing of an automobile.

STORY OF A MOTOR TRUCK—3 reels—*General Motors Corporation, Pontiac, Mich.*

This picture gives the complete story of the manufacture of powerful trucks and shows in an interesting manner the value of these carriers to civilization and modern commerce.

NATION'S ROAD MAKER—*Dodge Bros., Inc., Detroit, Mich.*

This film shows the many and interesting uses of the "caterpillar" tractor in the making of roads—uprooting and removal of trees—removal of other objects—pulling train formation of graders and wagons.

RIGHT ON THE JOB—*Buick Motor Company, Flint, Mich.*

A motor trip from Portland, Oregon, to San Francisco, California—beautiful scenery of the Pacific Coast—interesting tests automobiles are put to by the fire department of San Francisco.

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STORY OF AN AUTOMOBILE (STUDEBAKER)—5 reels—*Bu. Mines*

This film covers the entire manufacture of an automobile from the raw material to the finished product—foundry, forging and finishing of metals and the final assembling of parts.

STORAGE BATTERIES AND DIAMOND CUTTING—*N. C. R.*

The diamond cutting industry—the manufacture of necklaces—building storage batteries.

VALVE-IN-HEAD MOTOR—3 reels—*Buick Motor Co., Flint, Mich.*

The use of the animated drawing is of special interest in this film which shows the making, assembling, and operation of a valve-in-head motor—ignition and action of gas in the cylinder.

V-TYPE CYLINDER CAR—3 reels—*Cadillac Motor Car Co., Detroit, Mich.*

The making, assembling and minute inspection and tests of an automobile.

Railroads

BUTTE, ANACONDA & PACIFIC RY.—*G. E.*

The advantages of electrification of railways, using as an example the line between Butte and Anaconda, over which copper ore must be transported through a rough and mountainous country.

CONSERVATION OF RAILWAY FUEL—*Bu. Mines.*

Showing correct and incorrect methods of firing locomotives.

ELECTRIFIED TRAVELOGUE—2 reels—*W. E.*

These two reels take us back to ancient Egypt and trace the development of transportation methods by the various peoples up to the electric locomotive—the construction and operation of a modern electric railroad are convincingly shown—the scenery along the way adds greatly to the interest of the picture.

KING OF THE RAILS—3 reels—*G. E.*

This film on transportation goes back to the native American and through the stone-boat, wheel-barrow, and more modern vehicles to the DeWitt Clinton, the first locomotive, a feature that will prove of great historical interest. The film culminates with the great electric locomotive of the Chicago, Milwaukee, and St. Paul Railroad now in operation through the Rocky Mountains.

MAKING RAILROAD TIES ON THE WASATCH—U. S. Ag.

This picture shows the cutting of great pines into railroad ties.

*Building Materials***BRICK—FROM CLAY TO PAVEMENT—U. S. Ag.**

The preparation of clay from the raw material to vitrified paving brick—views of some finished brick roads.

**HOLLOW BUILDING TILE—Hollow Brick Tile Association,
Conway Bldg., Chicago, Ill.**

Showing the process of the manufacture of hollow building tile and its use in building construction; interested animated drawings show its heat and cold resisting qualities.

LUMBERING—N. C. R.

The lumber industry in America and Europe.

**MANUFACTURE OF FACE BRICK—The American Face Brick
Association, 130 N. Wells St., Chicago.**

A highly educational film on the various operations in the manufacture of face brick.

MARBLE INDUSTRY—Bu. Mines.

A film showing the quarrying, cutting, and finishing of marble.

MIXED ASPHALT PAVEMENTS—Bu. Mines.

Asphalt from plant to roadway and the approved methods of constructing asphaltic concrete and sheet asphalt roads.

**NEW ENGLAND HOME, THE—ROOFING—Bird & Son, East Wal-
pole, Mass.**

An unusually interesting industrial film on the manufacture of modern fire-proof roofing material, with views of old New England homes dating back nearly three centuries.

OUT OF THE WOODS—N. C. R.

An interesting film of the lumbering industry in the Northwest, with scenes showing the hazardous work of the lumberjack.

**ROMANCE OF CLAY—Atlas Educational Film Co., Oak Park,
Ill.**

The entire story of clay, prefaced with diagrams and quotations show-

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ing the formation of the clay beds prior to and during the glacial age, modern methods of mining, manufacturing, burning and glazing.

SEE SAW—MANUFACTURE OF SAWS—*N. C. R.*

An exposition of the interesting processes through which a saw passes in its manufacture.

STORY OF STEEL ALLOY—*4 reels—Bu. Mines.*

The ferro-alloy storage bins—the great cast-iron scrap piles—the charging of scrap iron into open-hearth furnaces—the pouring of the white-hot molten metal and the rolling of the ingots into merchant bar.

WHAT ABOUT MACADAM?—*U. S. Ag.*

An explanation of the means whereby macadam roads may be made satisfactory for automobile traffic—approved methods of building macadam roads on Federal aid projects under the Bureau of Public Roads.

WINTER LOGGING—*Caterpillar Tractor Co., Peoria, Ill.*

This film shows the use of the "caterpillar" tractor in the removal of logs in the northern woods—pulling train formations of heavily loaded log sleds from forest to mill—exceptionally good winter scenics throughout.

Cloth and Coverings

CARPETING A CENTURY—*Bigelow Hartford Co., 385 Madison Ave., New York City.*

Detailed scenes of the operations in the manufacture of rugs and carpets from the preparation of the woolen yarn to the finished article, including setting the design, weaving, shearing, etc.

CIVILIZATION'S FABRIC-COTTON—*Converse & Co., 88 Worth St., New York City.*

Complete story of cotton, the great fabric of modern life.

COTTON MANUFACTURE—*4 reels—U. S. Ag.*

The story of cotton from the time it arrives at the mill, including the steps of spinning, weaving, etc., until the cotton cloth is finished.

FROM EAST TO WEST—*N. C. R.*

This film shows the making of carpets and rugs, including the special machinery used in this industry.

FROM COCOON TO SPOOL—*Corticelli Silk Co., 373 W. Adams St., Chicago, Ill.*

One of the first of the educational industrial films to find favor in the schools. Very interesting and instructive views are given of the life of the silk worm as well as the complete manufacture of silk. Includes a number of Japanese scenes.

JUST KIDS (GLOVES)—*N. C. R.*

The detailed manufacture of gloves is shown in an interesting manner in this reel.

LINEN MANUFACTURE IN AMERICA—*Clearfax Linen Rug Co., Duluth, Minn.*

An unusually interesting picture of American methods of handling an ancient industry—fields of flax—harvesting and preparation for the loom—European hand methods as compared to American—processes in the manufacture of linen rugs.

MAKING LINOLEUM—*Armstrong Cork Co., Lancaster Pa.*

An instructive film on an interesting subject—breaking and grinding of cork and its preparation with oil—shrinking and stiffening the burlap base—the applying and pressing of ingredients—pattern printing and seasoning—originating of pattern and cutting stencils.

ROMANCE OF CLOTH—*National Motion Picture Bureau, Bedford, Mass.*

A double story of the manufacture of cotton and wool, from the natural product to the finished, bolted cloth.

ROMANCE OF SILK—*Belding Bros. Co., 201 W. Monroe St., Chicago, Ill.*STORY OF VIRGIN WOOL, THE—*Leggett.*

A reel showing the industry from the sheep's back to cloth.

TO SUIT MAN—*Making Clothing—N. C. R.*

An interesting and cleverly arranged film on the making of clothing.

WHAT THE OCEAN HIDES—*N. C. R.*

Showing the new industry which furnishes the world with shark skins for shoes, pocketbooks, bookcovers, traveling bags, and novelties of all kinds—catching of the sharks and processes in the preparation of the skin.

YOUR HAT AND MINE—*Crofut & Knapp, New York City.*

An interesting industrial film, showing the manufacture of felt hats, including the shaving of the fur, washing, forming, shrinking, steaming, blocking, etc.

*Bookmaking, Printing, Etc.*MAKING A SALES BOOK—*N. C. R.*

This film shows the processes in making the electrotpe and then views of the presses turning out sales slips—the cutting, binding, and use of sales books.

MAKING A GREAT NEWSPAPER—*3 reels—Rowland Rogers Studios, 71 W. 23rd St., New York City.*YOUR BOOK—*2 reels—Ginn and Co., Boston, and N. C. R.*

This film shows books as man has made them since 5000 B. C.; the original books of clay, wood, papyrus, parchment, and paper are shown, and then the much more complex work of making books today—the linotype machine and hand typesetters—making of illustrations—printing—various steps in book binding.

KING'S PRINTING OFFICE—*N. C. R.*

An industrial film showing how a royal printery is operated.

*Electricity*BEHIND THE BUTTON—*National Electric Association, 29 W. 39th St., New York City.*

Interwoven with the story of electricity as a labor saver is the old legend of Thor, the god of thunder, and his magic hammer.

BENEFACITOR, THE—EDISON—*3 reels—G. E.*

This film shows Edison as a newsboy, in his railroad laboratory, later

as a telegraph operator, and inventor of the incandescent lamp and the dynamo—a thrilling story of struggle and achievement, authentic and educational.

BENJAMIN FRANKLIN'S RETURN—*Public Service Co., 73 W. Adams St., Chicago, Ill.*

This film shows Franklin's early experiments with electricity, and the great progress we have made in its use in the last century.

LIGHT OF A RACE—*G. E.*

The evolution of artificial light from the flint sparks of the caveman to the incandescent lamp—a reel of real historical value and of excellent photography.

CONDUCTOR, THE—*G. E.*

The transformation of copper from the mines in the Rocky Mountains, cotton from the South, rubber from Brazil, and silk from Japan, into the finished lamp cord, the conductor.

CONSOLATION CLUB—*W. E.*

The consolation club is composed of primitive household appliances which have been discarded by a modern housekeeper—the old appliances come to life and recite their woes—entertaining, but only slightly educational.

CURRENT OCCURRENCES—*N. C. R.*

An interesting reel on the making of electric flatirons and percoiators.

CROPS AND KILOWATTS—*U. S. Ag.*

Water power and irrigation uses of water as conserved in the National Forests.

DE-LIGHT—*N. C. R.*

An interesting story of the manufacture of electric light bulbs, showing earlier means of obtaining artificial light.

EDISON, THOMAS A.—*G. E.*

Mr. Edison is conducted, as a guest of the General Electric Company, through its laboratories, where he sees the methods employed in the development of his great invention, the incandescent lamp—fine motion picture photography, instructive to the student of electricity.

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ELECTRICAL HEART, THE—Y. M. C. A. *Motion Picture Bureau,*
120 W. 41st St., New York City, and 1111 Center St.,
Chicago, Ill.

Storage Batteries and their production.

FARM ELECTRIC VISUAGRAPH, THE—W. E.

The possibilities of rural electrification told in story form.

GLOW OF THE LAMP, THE—G. E.

This film shows the great variety and multiple uses of the incandescent lamp—the manufacturing end is not neglected.

HEADLIGHTS—2 reels—W. E.

An interesting safety film showing the necessity for good headlights.

JUPITER'S THUNDERBOLTS—W. E.

The history of the storage battery; Benjamin Franklin's experiments with his kite, Galvani's experiments with frog legs, Plante's first battery which was made in 1860; the place that the storage battery holds after sixty-six years of development; its uses and details of manufacture.

KILOWATT, THE CONQUEROR, *New California Electric Corporation, Denver, Colo.*

The great dams of the west and electrical power plants and equipment; scenes in the Sierra Nevadas; Mt. Dana and Mt. Whitney; Imperial Valley, the truck gardens of America.

LIGHT OF THE NATION—W. E.

A rather detailed and technical presentation of the manufacture of Mazda lamps.

MAKING TELEPHONE HISTORY—*American Telephone & Telegraph Co., 195 Broadway, New York City.*

Interesting points in the history of the telephone—Alexander Graham Bell, the inventor—the first crude telephone in 1875 and its evolution to date—an early switchboard as contrasted to the modern telephone exchange—overhead and underground cables—laying an ocean cable.

NOTABLE ACHIEVEMENTS IN ELECTRICITY—3 reels—*Atlas Educational Film Co., Oak Park, Ill., or Willard Battery Co., Cleveland, Ohio.*

Highlights in the development of electricity shown in an interesting

manner. "The Amber Soul," "Volta's Discovery," and the "Friction Ball," are the titles of the reels which make the complete story.

NUMBER, PLEASE—TELEPHONE—*N. C. R.*

An interesting reel about the telephone and telephone service.

RADIO TELEPHONE, THE—*American Telephone & Telegraph Co., 195 Broadway, New York City.*

Technical diagrams are used to explain the principles of the radio telephone—voice, light, and electric wave vibration—the oscillograph—construction and use of the vacuum tube explained—radio stations and broadcasting.

ROLLING STEEL BY ELECTRICITY—*W. E.*

Steel making by the steam method and also the electrical method. The superiority of the electrical method is dwelt upon. Good photography and logical arrangement make this an instructive film.

WATER POWER—*W. E.*

This film made in coöperation with the Bureau of Mines shows the ancient and modern methods of using the energy of falling water—the generation of electricity by a turbine plant and the transmission of current at high voltages over long distances.

WESTINGHOUSE WORKS—*2 reels—G. E.*

This film concerns itself frankly with the Westinghouse plant at East Pittsburgh. It presents to the visitor an instructive series of views of the manufacture of electric articles, including a giant electric locomotive.

YOKE OF THE PAST—*3 reels—G. E.*

The Yoke of the Past is physical drudgery, and this film shows in an interesting manner how man's mind and his inventions have relieved him of the great labor of primitive methods and replaced it with the use of modern machinery.

YOURS TO COMMAND—*National Electric Association, New York City.*

The service of electricity, a tireless and invisible servant; power and light as used by industries, commerce, and the home; its use in modern motion picture production.

Metals and Mineral

CONQUEST OF A WILDERNESS,—4 reels—*Illinois Steel Co., 208 S. LaSalle St., Chicago, Ill.*

The building of the great mills and the city of Gary by the Illinois Steel Company.

IRON AND STEEL—*Ford Motion Picture Laboratories, Detroit, Mich.*

An educational film on the manufacture of steel, from the ore fields to the finished product, showing the great transports on the Great Lakes.

MAKING STEEL AND WIRE—5 reels—*American Steel & Wire Co. 208 S. LaSalle St., Chicago, Ill.*

One is amazed at the great variety of uses to which wire is put in modern life, as shown in this film. From the wire nail to piano wire seems like a long journey, but when the steps are all shown the essential unity of the process is seen.

THE MAKING OF STEEL—2 Reels—*International Harvester Co., 606 South Michigan Ave., Chicago, Ill.*

Latest picture of a great industry.

STEEL PIPE—4 reels—*Bu. Mines.*

This film shows the manufacture of steel pipe from the mine, transportation, blast and open-hearth furnaces, ingot pouring, blowing, skelp mills, spelterizing, and welding. (For technical classes.)

STEEL AND PLATE GLASS—*N. C. R.*

Making electrotypes blocks—a visit to a steel mill—a plate glass factory.

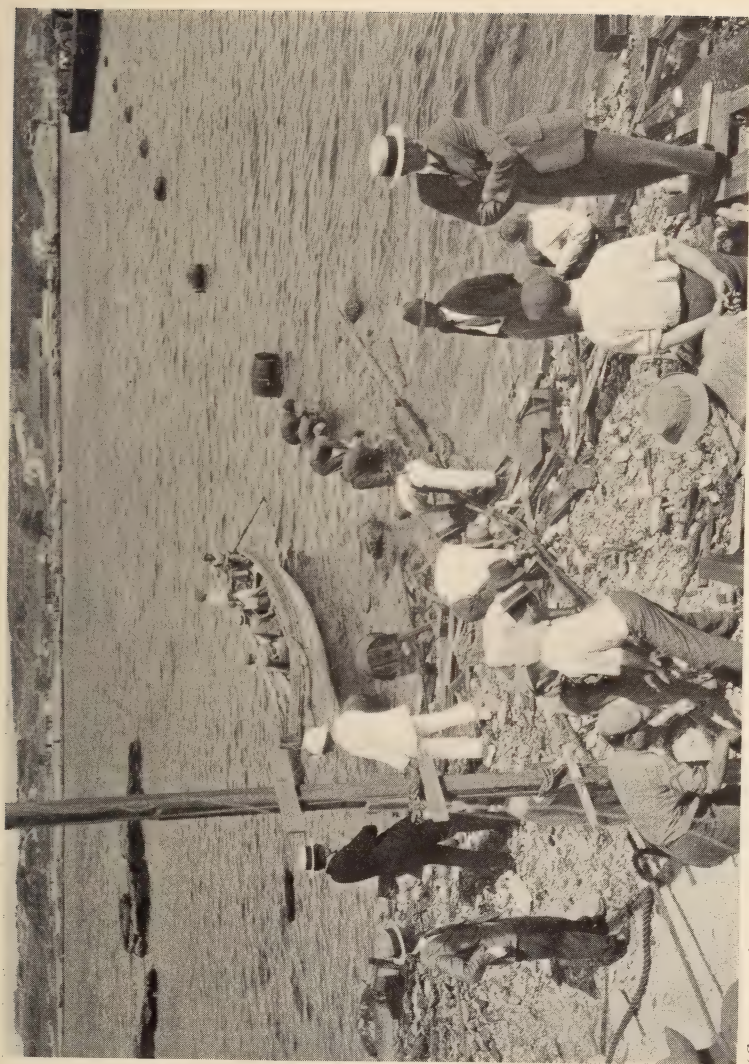
SILVERWARE—*N. C. R.*

How silver plating is done.

STORY OF STEEL—6 reels—*Bu. Mines.*

The complete story of steel made by the Bureau of Mines and the United States Steel Corporation. (For technical classes.)

Reel 1—Shows open-pit iron mining; transportation of ore by water; blast furnace; by-product coke-oven operation; Bessemer and electric furnaces; pouring ingots and the soaking pits,



"Courtesy of American Telephone and Telegraph Company."

PULLING CABLE ASHORE AT HAVANA. SCENE FROM "MAKING TELEPHONE HISTORY"—p. 306



Reel 2—Manufacture of rails, plates, and other products hot-rolled from ingots.

Reel 3—Manufacture of wire products.

Reel 4—Manufacture of pipe.

Reel 5—Manufacture of tin plates.

Reel 6—The human side of steel making.

TRIPLEX PROCESS MAKING STEEL—2 reels—*Bu. Mines.*

These reels show the blast furnace, Bessemer converter, open-hearth, ingot pouring, and rolling mill operations of a great steel plant.

Mining

COPPER MINING, MILLING AND SMELTING—4 reels—*Bu. Mines.*

The mining, transportation, and preparation of this valuable metal is shown in detail.

COPPER MINING AT ANACONDA, MONT.—12 reels—*Bu. Mines.*

Six reels show mining operations and six show reduction works at one of the world's largest copper mines. Many safety scenes are given. For technical students only.

DANGEROUS AND SAFE PRACTICES IN SOFT COAL MINING—*Bu. Mines.*

This reel shows the causes of accidents and disasters in coal mining and methods of prevention.

DREDGE GOLD MINING—*Bu. Mines.*

An interesting reel on the source of gold.

DREDGING ANTHRACITE COAL—*Bu. Mines.*

An interesting reel showing the recovery of coal from the river bed.

INDIANA LIMESTONE—2 reels—*Bu. Mines.*

A picturization of the preparation of this stone from which some of America's most beautiful buildings are made—quarrying, cutting and finishing.

IRON AND GOLD MINING PAGEANT—*Bu. Mines.*

Scenes from the mining industry pageant given by the Carnegie Institute of Technology.

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MINING AT THE CALUMET-HECLA—*Bu. Mines.*

Shows mining, milling, smelting, and the pouring of the molten copper.

MODERN BLAST, A—*Hercules Powder Co., Wilmington, Del.*

Showing the use of dynamite in surface coal mining—drilling and the preparation of the charge—loading and tamping—detonating.

MODERN COAL MINING—3 reels—*Jeffrey Manufacturing Co., Columbus, Ohio.*

This film shows the use of modern machinery in coal mining; cutters which cut the walls and bottom of the coal mine, and the "entry driver" which cuts and loads coal without the use of explosives. For technical students only.

MODERN GOLIATH EXCAVATING MACHINES—4 reels—*Bu. Mines.*

The use of the excavating machine in mining and road building—steam and gasoline shovels, carriers holding up to eight cubic yards—rail track—caterpillar—tower—drag-line equipment. For technical students only.

ONE OF THE WORLD'S GREAT COPPER MINES—3 reels—*Bu. Mines.*

This reel shows the Inspiration Copper Mine and the methods used by which they have cut the cost of production to a minimum.

ROCK DRILLING—4 reels—*Bu. Mines.*

The use of various types of drills. Reel 1, iron mining—Reels 2 and 3, the granite industry—Reel 4, the construction of the new 10-mile power canal at Niagara Falls. For technical students only.

SAFETY LESSONS IN METAL MINING—6 reels—*Bu. Mines.*

This film shows how simple safety measures can prevent many accidents in the mines which often result in injury and loss of life and property.

SANDSTONE INDUSTRY—2 reels—*Bu. Mines.*

The cutting and removal of sandstone from a deep quarry—machining the stone—the laying of curbs and sidewalks.

SAVING COAL AT HOME—*Bu. Mines.*

This reel shows the value of the insulating of heating pipes for coal economy.

STORY OF COAL, THE—*Bu. Mines.*

This reel depicts the complete work of the coal mine. Mining and blasting of coal—loading of mine cars—hauling underground and hoisting to the surface—grading, cleaning and loading at the tippie—shipment by rail.

WHEN A MAN'S A MINER—4 reels—*Bu. Mines.*

Realistic and vivid coal mining scenes and the lesson of safety are interwoven with a very good human interest story.

ZINC MINING—4 reels—*Bu. Mines.*

The story of zinc, including mining, milling, and smelting.

*Glass***MAGIC JAR, THE—*Atlas Educational Film Co., Oak Park, Ill.***

This film shows the early struggle for food by prehistoric man, the accidental discovery of preserving meat through smoking, then an exposition of modern home canning methods by Champion U. S. Canners.

MAKING CUT-GLASS—*N. C. R.*

The processes by which beautiful objects are made from cut-glass are shown from the furnace to the finished product.

ROMANCE OF GLASS, THE—*Atlas Educational Film Co., Oak Park, Ill.*

The picturization of the discovery of glass by the Phœnicians—process manufacture of glass jars—the hand blowing method as compared to the modern machine method—explanation of the cold pack method of canning in modern fruit jars.

STORY OF A PRESCRIPTION BOTTLE, THE—*Illinois Glass Co., Alton, Ill.*

An interesting, descriptive and educational reel showing the old methods of manufacturing bottles compared with modern methods.

*Pottery***MAKING POTTERY—*N. C. R.***

The mixing and weighing of the clay—shaping on the potter's wheel—baking, decorating, and glazing.

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POTTER'S WHEEL, THE—*G. E.*

An interesting and educational film showing the manufacture of electrical porcelain, through the details of mixing the ingredients, molding, turning, glazing and firing in the kilns.

Miscellaneous

FINE ART OF MAKING MUSICAL INSTRUMENTS, THE—*Atlas Educational Film Co., Oak Park, Ill.*

An excellent film showing the manufacture of saxophones from the flat brass to the finished instrument, opening with the story of the early struggles of Sax to perfect his invention.

HOME CONVENIENCES—*International Harvester Co., Agricultural Extension Dept., 606 S. Michigan Ave., Chicago, Ill.*

How modern labor-saving conveniences can lighten the drudgery of woman's work on the farm.

HOW TO MAKE A RUBBER TIRE—*Ford Motion Picture Laboratories, Detroit, Mich.*

The complete process of cultivation and preparation of the rubber and its final manufacture—practically no advertising.

JUST WRITE—FOUNTAIN PENS—*N. C. R.*

The story of writing instruments from prehistoric times to the modern fountain pen—details of its manufacture.

KEWPIE DOLLS AND TOY TRAINS—*N. C. R.*

Showing the manufacture of two of the prime necessities of childhood.

MAKING GAME—*N. C. R.*

An entertaining reel showing the manufacture of sporting goods.

MOTION PICTURE INDUSTRY—*N. C. R.*

Interesting views of one of America's greatest industries—entire towns built for screen plays—mammoth stage settings—painting a portrait of Mary Pickford—making slow motion pictures.

OCEAN TEARS (SALT IN BAHAMA ISLAND)—*N. C. R.*

Scenes in the Bahama Islands showing the refining of salt from

ocean water and the various processes it passes through before shipment.

PASSING OF THE BROOM—*Hoover Suction Sweeper Co., 1411
Railway Exchange Bldg., Chicago, Ill.*

A playlet wherein husband and wife are concerned in the merits of the suction sweeper as compared with the broom; a very presentable story well played.

RUBBER OF YESTERDAY, THE—*Goodyear Rubber Company,
Akron, Ohio.*

Gathering the rubber latex, methods of preparation and shipment. Old methods as compared with those on modern scientific rubber plantations of today.

SALT AND ROPE MAKING—*N. C. R.*

The production of salt by the evaporating system—the manufacture of rope—the primitive method as compared to the modern methods used in the factories in the Philippines.

SUDS—*Apex Appliance Co., 3223 W. 30th St., Chicago, Ill.
(An Atlas film)*

The origin of clothes—snow and stream washing as practiced by the American Indian—the crude washboard and soap of the pioneer—the confusion and labor of mother's washday—a modern washing machine in process of manufacture and operation.

TICK TOCK—*N. C. R.*

A picture on the manufacture of clocks, watches, and alarm clocks.

TRIP THROUGH THE N. C. R.—*2 reels—N. C. R.*

These two reels show the plant and methods of production in the National Cash Register Company's plant at Dayton, Ohio.

UKELELES AND WAX CANDLES—*N. C. R.*

The interesting process of making wax candles—making baskets from palm leaves—the manufacture of ukuleles in Hawaii—assembling a desk telephone.

WITH EVERY MEAL—KNIVES, FORKS AND SPOONS—*N. C. R.*

The manufacture of knives, forks and spoons.

Physiology and Health

(See Welfare also)

THE FLYING BANDIT—*N. C. R.*

An interesting and cleverly arranged film showing the plotting of the flies against humans; their rapid multiplication, how they spread disease, and methods of extermination are shown; animated cartoons add a touch of comedy. Can be rented also from the Rowland Rogers Studios, 71 W. 23rd St., New York City.

BEFORE THE DOCTOR COMES—*Society for Visual Education, 806 W. Washington Blvd., Chicago, Ill.*

A film on first aid which may be given injured workers by fellow employees.

BOY SCOUT CAMPS—*N. C. R.*

Building a bridge in a hurry—Ernest Thompson Seton starting a fire without matches—a company of deaf and dumb Boy Scouts—a scout camp in the Catskill Mountains and a vacation trip to Porto Rico.

END OF THE ROAD, THE—*5 reels—U. S. Public Health Service, Washington, D. C.*

Health propaganda in an effective form. In telling the life stories of two girls, this picture shows the dangers of promiscuity, the ravages of venereal diseases, and the health, love and happiness that come to woman as a result of proper training, education, and guidance. In the presentation of this picture, arrangements should be made for segregated audiences.

FIT TO FIGHT—*4 reels—N. C. R.*

The prevalence of prostitution during the war around the cantonments and its effect upon society is told in this story—the effects of venereal disease and its treatment. Recommended for young men only.

FLY AS A DISEASE CARRIER, THE—*U. S. Public Health Service, Washington, D. C.*

The structure of the common housefly—the way it carries disease—approved methods of extermination.

GENERAL PERSONAL HYGIENE—*U. S. Public Health Service, Washington, D. C.*

General standards of health for the individual.

GIFT OF LIFE, THE—*National Health Council, 370 Seventh Ave., New York City.*

The biology of reproduction from low forms of cell life to the human being.

HOW DISEASE IS SPREAD—*U. S. Public Health Service, Washington, D. C. and N. C. R.*

Showing the spread of disease through public drinking glasses, sneezing, coughing, etc.—animated map of the United States showing spread of disease.

HOW THE MOSQUITO SPREADS DISEASE—*U. S. Public Health Service, Washington, D. C., and N. C. R.*

The life history of the mosquito and advice on how to prevent fever and the extermination of the mosquito.

HEART AND CIRCULATION OF BLOOD—*N. C. R.*

The action of heart, circulation and purification of the blood is shown in an interesting manner with the assistance of animated drawings.

HOW PLANTS AND ANIMALS CAUSE DISEASE—*U. S. Public Health Service, Washington, D. C.*

Parasites and how they spread disease—the multiplication of bacteria and their action on living tissue.

HOW TO PREVENT DISEASE—*U. S. Public Health Service, Washington, D. C.*

Personal hygiene, pasteurization, quarantine, vaccination, etc.

HOW TO KEEP COOL IN HOT WEATHER—*N. C. R.*

Approved method of reducing weight and maintaining normal weight—how to keep cool in hot weather.

INTESTINES OF A MOUSE—*N. C. R.*

Of special interest to high school students or zoölogy classes; the subject is thoroughly covered in an interesting manner.

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INTERDEPENDENCE OF LIVING THINGS—*U. S. Public Health Service, Washington, D. C.*

This film shows the sun as the source of energy and the elemental sources of nourishment, raw materials, etc.—bacteria in the scheme of things.

LITTLE COMRADES (OPEN AIR SCHOOL)—*N. C. R.*

Interesting scenes of study, exercise, rest, etc., in an open air school.

MALARIA CONTROL WORK—*U. S. Public Health Service, Washington, D. C.*

The cause of the disease and treatment.

MILK FOR YOU AND ME— $\frac{1}{4}$ reel—*U. S. Ag.*

A four minute trailer, for special use during "Milk for Health" week.

PERSONAL HYGIENE FOR YOUNG MEN—*U. S. Public Health Service, Washington, D. C.*

Sex education and personal hygiene for men, with an explanation of sex organs and impulses and the danger of venereal disease.

PERSONAL HYGIENE FOR YOUNG WOMEN—*U. S. Public Health Service, Washington, D. C.*

A good reel of sex education and personal hygiene for women—sexual reproduction is illustrated with anatomical drawings.

PROTOPLASM, THE BEGINNING OF LIFE—*U. S. Public Health Service, Washington, D. C.*

An interesting educational film showing the earliest forms of cellular life and their methods of reproduction—reproduction in plant life.

ROENTGEN X-RAY—*N. C. R.*

An explanation of the invention that is one of the greatest steps in medical science—its use and operation.

SOCIAL HYGIENE FOR WOMEN—2 reels—*U. S. Public Health Service, Washington, D. C.*

A more detailed exposition of the subjects dealt with in "Personal Hygiene for Young Women."





A WEATHER BUREAU METEOROLOGIST MAKING A "DUST COUNT" FROM A DIRIGIBLE BALLOON, AS SHOWN
IN THE U. S. DEPARTMENT OF AGRICULTURE FILM, "EXPLORING THE UPPER AIR"—p. 323

THAT MATTER OF HEALTH—*Atlas Educational Film Co., Oak Park, Ill.*

The vital importance of proper and modern sewage, and sewage materials, to individual and public health. The reel touches on the ancient cities of Mesopotamia and Babylon and the great plagues of the Middle Ages to impress its lesson.

TOOTHACHE—*N. C. R.*

The story method is used to impress information regarding the cause and cure of toothache and the importance of proper dental attention.

TURN ON THE WATER!—*U. S. Ag.*

The danger of impure water on the farm—inexpensive systems—good and bad water supply systems.

VENEREAL DISEASES—3 reels—*U. S. Public Health Service, Washington, D. C.*

A scientific treatment of the subject of venereal disease.

DENTAL HYGIENE AND THE ANIMALS—2 reels—*Colgate & Co., New York City.*

A film on dental hygiene from the child's viewpoint. Educational and entertaining.

Welfare

AMERICA'S HERITAGE—BOY SCOUTS—*Goodyear Tire & Rubber Co., Akron, Ohio.*

A motion picture record of a Boy Scout tour through the eastern states on a motor truck.

AN AMERICAN IN THE MAKING—*Bu. Mines.*

An excellent reel on Americanization, industrial safety and welfare.

BABY WELFARE REELS—*Borden Condensed Milk Co., 103 Hudson St., New York City.*

BARNEY MEDICAL CLINIC (ROTARIANS FOR CRIPPLED CHILDREN)
—*N. C. R.*

Showing the work of the Rotarians in obtaining medical care and

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treatment for crippled children of the cities, who would otherwise be without aid.

HOW TO BEAUTIFY YOUR COMMUNITY—2 reels—*N. C. R.*

A practical film on the reclaiming of a run-down, ugly neighborhood—steps by which the people of a community can undertake and accomplish this work—the principles of landscape gardening—the result of co-operation.

BOY SCOUTS AT THE FAIRGROUNDS—*N. C. R.*

Showing the Boy Scouts at a fair, pitching camp, various activities, exhibits, etc.

BOY SCOUT ACTIVITIES—*N. C. R.*

The Boys' Seminole Club in Florida—a fire fighting drill—Swiss Boy Scouts rescue a herdsman—Boys' Week celebration in New York City.

CHRISTMAS THOUGHTS—*N. C. R.*

A story on the activities of the Goodfellow Clubs at Christmas.

DANGER THAT NEVER SLEEPS—*National Board of Fire Underwriters, 76 William Street, New York City.*

An educational film designed especially for children, dealing with safety practices around the home—fire is the danger that never sleeps.

DAYTON, A CITY OF BEAUTIFUL HOMES AND FACTORIES—*N. C. R.*

The progress and development of a city from 1910 to the present time—views of its factories, buildings and homes.

DIARY OF A MURDERER (THE FLY)—*Bu. Mines.*

An interesting and educational film showing the menace of typhoid in the fly.

FACTORY WELFARE—*N. C. R.*

The activity of the welfare department of a large industrial institution—beautiful surroundings—recesses—recreational instruction and assistance—athletics and sanitary conditions.

FOR THE FUTURE—MICHIGAN STATE INDUSTRIAL SCHOOL—*N. C. R.*

An interesting reel with views of the Michigan State Industrial School and the training it is giving the workers of tomorrow.

FIRE FIGHTERS—*N. C. R.*

Fire prevention day and school children's drill and the awarding of medals—old and new methods of sending fire alarms—the run to the fire—firemen at work—using the life nets.

FIRE—*National Board of Fire Underwriters, 76 William St., New York City.*

A film produced by the National Board of Fire Underwriters for general distribution to call attention to the great fire losses and the preventable nature of the majority of these disasters.

FIRE PREVENTION—*Foamite-Childs Corporation, Utica, N. Y.*

An advertising film showing the use of the Foamite System in fighting fires of oil, gasoline and kerosene.

FIRE PREVENTION VS. OIL, ETC.—*Foamite-Childs Corporation, Utica, N. Y.*

An advertising film showing the use of the Foamite System in the oil fields. Unprotected tanks are struck by lightning and destroyed at a tremendous loss. Later a 55,000 barrel tank at the refinery is struck by lightning, but surrounding property is protected, and the fire extinguished at a slight loss.

FIRE PROTECTION VS. LIQUIDS—*Foamite-Childs Corporation, Utica, N. Y.*

An advertising film demonstrating the use of the portable apparatus of the Foamite-Childs Corporation in the control of fires of volatile liquids, dip tanks, etc.

GOOD ROADS—*N. C. R.*

The early trails of the Indian—the widening of early roads for the pioneer's prairie schooners—modern roads and their need in certain localities.

GOOD TURNS FOR OUR FORESTS—*U. S. Ag.*

The work of the Boy Scouts of America in forest conservation.

KEEPING OUT BAD FOOD—*U. S. Ag.*

The work of the United States Department of Agriculture in protecting the health of the public by means of a system of inspection and scientific tests of food stuffs.

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KEYSTONE, THE—*National Board of Fire Underwriters, 76 William St., New York City.*

The importance of fire insurance in commercial credit is shown in this picture. Animation and human interest make this a good film for general exhibition purposes.

MEN AND MANAGEMENT—*N. C. R.*

A practical film on business management, instruction, modern methods, elimination of waste, etc.

OUTLAW, THE: KING CARELESSNESS—*Carter Cinema Producing Corporation, % Evans Film Laboratories, 1476 Broadway, New York City.*

An animated cartoon with allegorical characters impressing the lessons of safety.

PUBLIC WELFARE #1—*N. C. R.*

Serving milk to pupils in Kindergarten class—a check room for babies—a San Francisco Chinatown baby show—a school of free dentistry—a roof playground—teaching crippled children to make toys—fresh air camp for New York boys.

PUBLIC WELFARE #2—*N. C. R.*

Training the blind—children's tuberculosis sanitarium in New England—a home for orphaned children—the Redham orphanage in England.

RAT MENACE, THE—*New York Bureau of Public Health, 137 Center St., N. Y. C.*

The danger of disease as spread by rats and the proper methods to be used for their extermination.

REASONS WHY—*Illinois Steel Co., 208 S. LaSalle St., Chicago, Ill.*

A film on accident prevention and safety practices in the steel industry, where the slightest carelessness or neglect may mean a disaster.

REAWAKENING, THE (TRAINING CRIPPLED SOLDIERS)—*N. C. R.*

This film was made at Fort Sheridan, Illinois, and shows the training of crippled soldiers.

THE ROAD GOES THROUGH—*U. S. Ag.*

How the Western road builder overcomes the barriers to transportation.

ROADS FOR ALL AMERICA—6 reels—*U. S. Ag.*

Made in connection with the visit to Buenos Aires, Argentina, of the United States delegation to the First Pan-American Road Congress. Interesting views of President Coolidge, various presidents of South American republics, the Panama Canal, types of highways, and scenes of general interest.

SAFETY DEVICES—*N. C. R.*

The accident prevention work in a large industrial plant—safety devices for machinery—correct methods of operating machines and handling stock.

THE SHORT COURSE—*U. S. Ag.*

Photographed at Baton Rouge, Louisiana, showing the routine work of a thousand boys and girls in the annual Short Course.

TREES OF RIGHTEOUSNESS—3 reels—*U. S. Ag.*

A forest fire picture, and a preachment against the practice of "woods-burning."

UNIVERSITY OF THE NIGHT—*International Correspondence Schools, Scranton, Pa.*

A film on the value of home study, and the great possibilities of advancement to be gained through proper guidance and self-instruction.

WHAT THE FOREST MEANS TO YOU—2 reels—*U. S. Ag.*

Man's dependence on the forest and the danger of its complete destruction.

Athletics and Sports

AMUSEMENT PARKS AND OTHER SPORTS—*N. C. R.*

Games as they are played in amusement parks—coasting on kiddie wagons—the game of "follow the leader"—quoit pitching—petola, a favorite Spanish pastime—the stick game, as played by the American Indians.

ARCHERY, BOWLING AND POLO—*N. C. R.*

An exhibition of pocket billiards—a New England archery contest—

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a bowling match—broom polo—a motorecycle road race in England—greyhound race in Florida—a private race course in Virginia—a paper hunt on horseback.

CAMERA HUNTING IN CALIFORNIA NATIONAL FORESTS—*U. S.*

Ag.

A springtime hunt for deer, using a camera instead of a gun.

COLLEGE ATHLETICS AND JIU JITSU—*N. C. R.*

Japanese festival at a women's college—folk dances and athletics—tug of war—the "wall game" at an English college—association football in Great Britain—jiu jitsu, the Japanese art of self-defense.

DANCING—OLD AND MODERN—*N. C. R.*

A rehearsal for an amateur follies show—outdoor classic dancing—the native dances of Spain—Russian Folk Dance—the Greek Dance in Japan and America—a comparison of the slow and dignified minuet with the modern jazz.

HAPPY HOURS—*N. C. R.*

A film showing the practice of favorite American pastimes; baseball, golf, surf riding, tobogganing, tennis, polo, football, etc.

HUNTING AND FISHING—*N. C. R.*

The barefoot boy goes fishing—scenes of Annie Oakley, champion woman rifle shot, hunting wild ducks.

LE BALLET DE FORÊT—*N. C. R.*

An annual pageant and dance in the forest near Dayton, Ohio.

WATER SPORTS—*N. C. R.*

Interesting views of yachting in Norway—canoe races—riding the waves on surf boards—field day of British jackies—walking the greased plank—crossing the equator aboard a United States warship.

Economics, Business, Etc.

GETTING THE MOST OUT OF RETAILING—*2 reels—N. C. R.*

Produced especially for retail merchants and dealing with the four subjects of: (1) Store Management; (2) Newspaper Advertising; (3) Window Displays; and (4) Retail Selling.

FACE TO FACE WITH FACTS—4 reels—N. C. R.

The use of modern methods and the systematic handling of records and transactions in the rescue of a retail store that is on the verge of ruin—a human interest story makes these films suitable for general exhibition.

EFFICIENCY IN OFFICE WORK—N. C. R.

Efficient office methods and practices which can be applied to other kinds of work as well.

Astronomy, Physics and Chemistry**COMMUNING WITH THE HEAVENS—Can. M. P.**

An interesting, non-technical film on the Dominion National Observatory and the work of the astronomers. This film has the recommendation of well-known astronomers.

SCIENCE—N. C. R.

The analysis of tears under a microscope—slow motion pictures of a ball supported by a stream of water—interesting experiments with liquid air—the Yerkes Observatory—a short history of the progress of illumination.

RIDDLES OF THE FIRMAMENT—U. S. Ag.

Studies of various types of clouds and their significance.

EXPLORING THE UPPER AIR—U. S. Ag.

The Weather Bureau airplanes, dirigibles, and free balloons in their study of the upper air conditions for weather forecasting.

TIDES AND THE MOON—N. C. R.

Animated drawings and unusual photography show how tides are caused by the moon. The latter part of the film is devoted to experiments in physics, such as air waves created by a tuning fork, electric waves, and artificial snow from compressed gases.

EXPERIMENTS IN CHEMISTRY—N. C. R.

Showing the scientific side of everyday matters—preserving fruit experiments at the U. S. Bureau of Agriculture—scientific experiment with matches—testing liquors—experiments in combustion—formation of metals.

RENTAL FILMS *

Films listed in the three Libraries of Part I (Chapter III) are not relisted in Part II.

Geography

NORTH AMERICA

United States (Eastern States)

AMERICA'S GREATEST WONDER—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

A beautiful scenic of Niagara Falls.

BOSTON—*General Vision Co., 104 W. 42nd St., New York City.*

The city of Boston from a geographical standpoint—its key position with reference to shipping and New England industries.

CLIMBING MOUNT WASHINGTON—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

A hazardous but delightful trip by the Dartmouth Outing Club during a Christmas vacation with the temperature 20 degrees below zero.

INFINITE VARIETY OF LITTLE OLD NEW YORK, THE—*Carter Cinema Producing Corporation, % Evans Film Laboratories, 1476 Broadway, New York City.*

Typical scenes and industries of New York City.

* The distinction between Rental and Purchase Films is not a hard and fast one. Pathé Exchange, Inc., has a long term lease arrangement almost equivalent to sale. The Burton Holmes Laboratories will sell some subjects, but their list is given under Rental Films. Consult both lists when a film is wanted on a given subject. Rental prices are not given in Part II, as the lists were too long for securing the desired information; then, too, rental prices differed among the various exchanges. Three to five dollars per reel has been the prevailing range of prices.

LURE OF THE MAINE COAST, THE—*Carter Cinema Producing Corporation, % Evans Film Laboratories, 1476 Broadway, New York City.*

Wild animals and beauties of this seacoast region.

MARVELOUS MANHATTAN—*General Vision Co., 104 W. 42nd St., New York City.*

New York and its harbor as a geographical unit—the outlet and inlet of a nation's commerce.

MIDDLE ATLANTIC STATES—*General Vision Co., 104 W. 42nd St., New York City, and Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

One of the units in the series on United States Geography prepared especially for school classes.

NATURE'S WEALTH OF SCENIC BEAUTY AND SOME COTTAGES AT NEWPORT—*Carter Cinema Producing Corp., % Evans Film Laboratories, 1476 Broadway, New York City.*

Summer homes of wealthy Americans.

NEW ENGLAND FARM, A—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

The daily routine of a New England farm.

NEW ENGLAND STATES—2 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A selection of the physical features of New England designed to bring out the industries of the region. The reels include the coast cities, Lake Champlain and the typical industries of lumbering, quarrying, pasturing sheep and cattle, fishing, etc. A number of historic spots like Lexington, Concord, Plymouth Rock and the Pilgrim Monument are shown.

NEW YORK, EMPIRE STATE—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

Another of the series on United States Geography edited especially for school use. Logical presentation of the things that have made New York the empire state of the nation.

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OUR NATION'S METROPOLIS—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

Another unit of this series which takes up New York in detail and shows how it is the logical focus of the nation's business.

OUR NATION'S CAPITAL—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

Views of points of interest in Washington, D. C.

OUTDOOR EXERCISE IN A WOMAN'S CAMP IN MAINE—*Carter Cinema Producing Corp., % Evans Film Laboratories, 1476 Broadway, New York City.*

An intimate study of a new type of athletic girl in nature's out-of-doors.

PHYSICAL CHARACTER OF THE NEW ENGLAND STATES—*General Vision Co., 104 W. 42nd St., New York City.*

For those who wish another type of geographical lesson from that of the S. V. E., perhaps this two reel variation of the physical character of the New England States will form the basis of an interesting comparison. A thorough-going geography study made especially for classroom use.

PHYSICAL CHARACTER OF THE ATLANTIC STATES—2 reels—*General Vision Co., 104 W. 42 St., New York City.*

A companion film to the one just described.

PRINCIPAL CITIES—*General Vision Co., 104 W. 42nd St., New York City.*

A bird's-eye view of the fulcrum cities of the United States from the standpoint of geographical reasons for their importance.

QUAINT PROVINCETOWN OF CAPE COD—*Geo. Kleine Motion Picture Films, 49 W. 45th St., New York City.*

Mr. Kleine says, "We doubt if Europe with all her hoary age can boast of anything more quaint than these views of a New England town." The film starts with a panoramic view from the top of the Pilgrims' Monument. Provincetown is situated on the tip end of Cape Cod and is a rendezvous for artists and fishermen; the latter leading an almost primitive life. Ye Olde Towne Crier still proclaims the news.

Half of the population is Portuguese. Intimate views of the fishermen with their smacks filled with herring and mackerel. Mending nets.

RESOURCES AND INDUSTRIES OF NEW ENGLAND—2 reels—
General Vision Co., 104 W. 42nd St., New York City.

Continuing the geographical study of New England. The emphasis is here transferred from topography to commerce and industry. The whole series of six reels on this important section of our country places in the hands of teachers an assemblage of concrete ideas which will vitalize the ordinary text and map study.

SOUTH ATLANTIC STATES—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

Of the same general character as the above.

United States (Western States)

ACROSS THE GRAND CANYON—*General Vision Co., 104 W. 42nd St., New York City.*

In the midst of all the motion pictures that have been taken of this wonderful canyon, the present reel may safely be chosen as characteristic and inclusive.

AUSABLE FALLS IN THE ADIRONDACKS, THE—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A lively portrayal of the sports and scenes of this noted region.

CENTRAL PLAINS—2 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Illinois.*

A region of our country frequently neglected by motion pictures because it deals largely with farming and stock raising. Measured, however, by its importance to the prosperity of America, the central plains are worthy of the most detailed study.

CRYSTAL ASCENSION, THE—*Pathé Exchange, Inc., 35 W. 45th St., New York City.*

The ascent of Mount Washington by an interesting group of people.

FIRE FIGHTING FOREST RANGERS OF ARIZONA—*General Vision Co., 104 W. 42nd St., New York City.*

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GLACIER PARK—*General Vision Co., 104 W. 42nd St., New York City.*

Another photographer's record of this noted area. One of the General Vision Company's series on our national parks.

GOING TO THE SUN IN GLACIER PARK—*General Vision Co., 104 W. 42nd St., New York City.*

Still another picture of the same type.

GRAND CANYON OF ARIZONA—*George Kleine Motion Picture Films, 49 W. 45th St., New York City, and General Vision Company, 104 W. 42nd St., New York City.*

Tourists are seen descending into the Canyon, some on foot and others on burros. Passing Hermit's Rest, the party descends through the Devil's Corkscrew to the bottom of the Canyon, thousands of feet below, and returns by the Bright Angel's Trail.

GREAT PLAINS—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A study of the great valley between the Mississippi and the Rocky Mountains—views of the plains and the peaks and foothills of the Rockies—sheep and cattle on the range and en route to market—activities on a modern ranch—Denver, the great railroad center of the West.

MAN'S TRIUMPH OVER THE MIGHTY FOREST—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

Views of the log-floating time in the lumber district of the Northwest and scenes of camp life.

NATIONAL PARKS AND EAST RIVER TUNNELS—*1 reel—American Motion Picture Corporation, 126 W. 46th St., New York City.*

This film contrasts the natural wonders of Yellowstone with the East River Tunnels of New York, the engineering wonders which man has created to conserve human energy.

PIKE'S PEAK, THE SENTINEL OF COLORADO—*1 reel—Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A beautiful scenic film of the top of the world.

SCENES ALONG THE COLUMBIA RIVER HIGHWAY—1 reel—

Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.

A film combining the natural beauties of the Columbia River Highway with interesting views of the salmon industry.

SCENES ALONG THE NATION'S HIGHWAY—1 reel—*Carter Pro-*

ducing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.

Views of good roads of the United States.

SEQUOIA NATIONAL PARK—1 reel—*Pictorial Clubs, Inc., 350*

Madison Ave., New York City.

A pictorial trip through the great redwood forest of California.

SILVER HORDE, THE—*Pathé Exchange, Inc., 35 W. 45th St.,*

New York City and 418 S. Wabash Ave., Chicago, Ill.

Views of community fishing and the "smelt run" when the smelts come up the Western rivers by the millions.

SILVER TRAIL, THE—*Pictorial Clubs, Inc., 350 Madison Ave.,*

New York City.

Means of transportation and scenic beauties along the trails that the silver prospectors followed in the early days of the West.

TACOMA NATIONAL PARK—*General Vision Co., 104 W. 42nd*

St., New York City.

Beautiful scenic views of the mountains, streams and forests of the great Northwestern National Park.

THROUGH SHOSHONE VALLEY—1 reel—*Carter Cinema Pro-*

ducing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.

An interesting presentation of the greatest irrigation plant in the world.

* As this book goes to press word comes of an arrangement just perfected between Pictorial Clubs and Pathé Exchange, whereby Pathé, and its various exchanges, becomes physical distributor for Pictorial Clubs—like Pathé's similar arrangement with The Yale University Press Film Service for Chronicles of America Photoplays. Orders addressed to Pictorial Clubs, will reach the nearest Pathé Exchange.

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TITAN OF CHASMS, THE—1 reel—*Carter Cinema Producing Corp., c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A scenic film of the Grand Canyon of Arizona.

VANISHING RACE, A—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

In this reel are presented the Indians on the Blackfeet Reservation in their daily life—views of preparations for moving camp—the trip with tents and household goods through mountain trails and across streams to the new camp site—establishing the new home and the ceremonial dances that follow.

WITH THE HOPIS AND NAVAJOS IN NEW MEXICO—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

Beauties of the desert country of the Southwest and life and habits of the Indians who make the famous Navajo blankets.

WONDERS OF YELLOWSTONE—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

Showing the strange rock formations, the beautiful gorges and streams, hot springs and geysers of Yellowstone.

YOSEMITE NATIONAL PARK—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

The scenic beauties of one of our most wonderful National Parks.

United States (Southern States)

DOWN IN OLD RICHMOND—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

Interesting views of the cotton section and old Southern homes.

FLORIDA—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

A picture of Florida's beautiful scenery, industrial development, cities, and her great seacoast.

LAST OF THE SEMINOLES—*World Educational Film Co., 732 S. Wabash Ave., Chicago, Ill.*

A film on the Florida Indians, produced in natural color; the dress, habits, means of livelihood, and homes of the few hundred remaining of the great tribe are shown, as well as the natural beauty of the country.

PLAYING IN FLORIDA—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

The great recreation centers of Florida and the people who frequent them.

SOUTH ATLANTIC STATES—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

Views of the natural scenery, industries, cities, points of beauty and historical interest in Virginia, the Carolinas, Georgia, and Florida.

SOUTHERN STATES—2 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

An attempt to indicate pictorially the typical characteristics and industries of our southern group of states. The features included are the coastal strip, including the Florida Keys, the higher region approaching the Appalachian Mountains, the coal mining district of Birmingham, and the crops of cotton, sugar cane, rice, peanuts and fruit, as well as the type of lumbering peculiar to the South.

United States (General)

THE UNITED STATES—A TEN TALENT NATION—(*Thirteen reels forming a complete series of text films, edited by Genevieve Lamson, M. S., and Edith Dunham Foster; produced and distributed by The American Motion Picture Corporation, 126 W. 46th St., New York City.*)

Agricultural Resources—Ancestry and Classification of Oil—Animal Resources—Forest Resources—Life History of a Stream—Location, Climate and Boundaries—North America, the Center of the World Neighborhood—Mineral Resources—Rivers as Agents in Shaping the Surface of the Earth—Size and Topography—Soil Conservation—Topographic Formation—Water Resources.

*UNITED STATES—26 reels—*Burton Holmes Lectures, Inc.*,
7510 N. Ashland Ave., Chicago, Ill.

Alaska and the Arctic

ALASKA—6 reels—*Burton Holmes Lectures, Inc.*, 7510 N.
Ashland Ave., Chicago, Ill.

Reel 1, *The Alaska Cruise*: aboard a Princess Liner—Juneau—the Taku Glacier—Islands of Ice—Sitka—the Russian Church—American Indian School.

Reel 2, *A Summer Day in Skaguay*: the Lynn Canal—Fourth of July—enormous flowers and berries—a deserted village—the dog bus—Bridal Veil Falls.

Reel 3, *Over the White Pass*: from Skaguay to the Yukon—views of Dead Horse Gulch—Lake Bennett—Miles Canyon—the White Horse Rapids.

Reel 4, *Down the Yukon*: from White Horse City to the Flats—views of Fort Yukon—Rex Beach's house at Rampart—Railway construction—Fairbanks.

Reel 5, *The Klondike Today*: where Robert Service lived in Dawson—old and new mining methods, including the hydraulic system—making real gold bricks

Reel 6, *Atlin, the Switzerland of British Columbia*: Five Finger Rapids on the Yukon—views of Lake Atlin—a fox farm—and the Llewellyn Glacier.

PHYSICAL CHARACTER AND POLITICAL GEOGRAPHY—ALASKA—
1 reel—*General Vision Co.*, 104 W. 42nd St., New York
City.

An educational presentation of a subject of which photographs are

* The Burton Holmes series are for sale as well as rent. These films are for sale to schools at very low rates, but they are on inflammable stock. Schools requiring a large number of prints might be able to get them on non-inflammable stock by communicating with the Burton Holmes Laboratories.

While the Burton Holmes Travelogues are not produced for the schoolroom, most of the material is highly educational. The titles are sometimes in a vein not in the spirit of classroom study, but the teacher can help these out somewhat. The notes upon these reels were taken for the most part from the catalog formerly issued by National Non-Theatrical Motion Pictures, Inc.

rare. The pictures are combined with other studies in such a way as to make an informing reel.

COMMERCIAL GEOGRAPHY—ALASKA—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

Similar to the above with the emphasis on the commercial development of Alaska.

AMUNDSEN'S POLAR FLIGHT—3 reels—*Pathé Exchange, 35 W. 45th St., New York City.*

KIVALINA OF THE ISLANDS—6 reels—*Pathé Exchange, 35 W. 45th St., New York City.*

Not a strictly classroom film, as it is a romance, but the scenes and occupations of arctic regions constitute valuable geographical material.

WITH LIEUTENANT COMMANDER BYRD, U. S. N. IN AMERICA'S POLAR TRIUMPH—3 reels—*Pathé Exchange, 35 W. 45th St. New York City.*

Canada

CANADA—16 Reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Going to Halifax*: glimpses of Nova Scotia—small villages and roadside scenes—Halifax.

Reel 2, *The Land of Evangeline*: views of Acadia, with quotations from Longfellow's poem—apple orchards in bloom.

Reel 3, *From the Bay of Fundy to the St. Lawrence*: pilgrimage to St. Anne de Beaupré—St. John, New Brunswick—the Fundy tides and Montgomery Falls.

Reel 4, *Quaint Quebec*: the old French city of North America—historic places—the Château Frontenac.

Reel 5, *Montreal, Old and New*: the new Quebec Bridge—city scenes and views at the races—Château de Ramezay.

Reel 6, *Ottawa and Toronto*: ruins of the Parliament Buildings—a garden party—views of the Ottawa River and Niagara.

Reel 7, *Georgian Bay to Winnipeg*: the Thirty Thousand Islands—Ojibway Inn—the city of Winnipeg and the Fort William elevators—fishing on the French River.

Reel 8, *Regina to the Rockies*: the great plains of Saskatchewan and

334 MOTION PICTURES FOR INSTRUCTION

Alberta—views of Blackfeet camp—Bassamo Dam—Calgary—North-west Mounted Police.

Reel 9, *Beautiful Banff*: hotels—swimming pools—and scenic beauties of the city in the Canadian National Park.

Reel 10, *With the Stony Indians*: sports and customs of the Indians and the ceremonies whereby the Duke of Connaught was made a chief of the tribe.

Reel 11, *Exquisite Lake Louise*: called the most beautiful spot in North America—views of nearby lakes and glaciers.

Reel 12, *The Yo ho Valley*: the Canadian Yosemite—also views of Emerald Lake and Kicking Horse Canyon.

Reel 13, *On the Great Glacier*: views of the Illecillewaet and Asulkan Glaciers—on the Revelstoke Mountain Boulevard.

Reel 14, *Through Canadian Canyons*: the Kettle Valley Railway—Kootenay Lake—along the Fraser River to Vancouver.

Reel 15, *Vancouver and Victoria*: the two great cities of British Columbia—highland games and dances at the Scottish Field Day at Vancouver.

Reel 16, *Winter Sports in Quebec*: curling—skating—tobogganing.

FAREWELL, THE (*Bruce Scenic*)—*Educational Film Exchanges, Inc., 370 7th Ave., New York City.*

Beautiful views of sky, water and land.

GREAT WHITE NORTH, THE—4 reels—*American Motion Picture Corporation, 126 W. 46th St., New York City.*

A motion picture record of Rasmussen's trip toward the North Pole.

IN THE CANADIAN ROCKIES—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

The wonderful resources and scenery of the country served by the Canadian Pacific Railroad.

Central America

MEXICO—3 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *The Cruise to Vera Cruz*: the ocean trip from New York to Vera Cruz, with a glimpse of Havana's harbor—tropic seas and sunsets—activities aboard—Castle of San Juan de Ulua.

Reel 2, *Torrid Tampico*: the great city of the Mexican oil fields, its skyscrapers and the boom population that compares with the Alaskan gold rush.

Reel 3, *Mexican Oil Fields*: a story of oil and the oil fields—boring a well—the strike—tanking, piping and shipping the oil.

MYSTERIES OF YUCATAN—*Fox Film Corporation, 10th Ave., 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

Views of the cities, people, and industries of an interesting country.

PANAMA CANAL, THE—*General Vision Co., 104 W. 42nd St., New York City.*

A reel presenting the Panama Canal as one of the greatest civic enterprises of the world and an outstanding achievement of the United States.

WHITE INDIANS, THE—AN ETHNOLOGICAL ANOMALY—*Pathé Exchange, 35 W. 45th St., New York City.*

Actual pictures of these little known people.

SOUTH AMERICA

SOUTH AMERICA—5 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Who's Who in the Zoo*: strange South American animals—boating on the Tigre near Buenos Aires.

Reel 2, *Up the Upper Parana*: railway ferry on the Lower Parana River—views from a steamboat on a jungle river—the city of Posadas—Yerba Mate—Perto Aguirre.

Reel 3, *The Cataracts of Iguassu*: through the tropic forests to the Niagara of South America—on the Brazilian-Argentine frontier.

Reel 4, *Going Down to Buenos Aires*: a trip to South America, touching at Pernambuco, Bahía, and Santos—in a gale at sea—the beauties of the great industrial and cultural center of South America.

Reel 5, *Rolling Down to Rio*: views of the most beautiful natural harbor in the world—buildings, streets, magnificent avenues, and the Botanical Gardens of Rio de Janeiro—the city at night—the Sugar Loaf crowned with morning mists.

EUROPE

ALSACE-LORRAINE—6 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Strassburg Redeemed*: streets and buildings of the reconquered province of France—the Rhine Bridge—panoramas from the spire of the great cathedral.

Reel 2, *In Lovely Lorraine*: views of village and country life of Lorraine—tillers of the soil and embroiderers of fine cloth.

Reel 3, *In Happy Alsace*: beautiful vineyards, farms and villages in Alsace—festivals and processions.

Reel 4, *Frenchifying Metz*: the overturned German statues replaced by new figures—the splendid German buildings and the old French quarter.

Reel 5, *The Sentence of the Sarre*: the French occupation of the Sarre Valley—rich farms, great furnaces and foundries—a religious procession in Bonn on the Rhine.

Reel 6, *Alsatian Days*: a village welcomes its new priest—views of a patriotic festival and natives in the National Costume—the Castle of Hoh Königsberg.

ANCIENT ROME—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

Views of the Eternal City: St. Peter's—the Castle of St. Angelo—the Colosseum—the Forum—other points of historic interest.

AROUND WELLS AND ITS CATHEDRALS—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

An excellent film showing the old cathedral with its unique and beautiful architecture. The cloisters and the interiors are beautifully presented.

AUSTRIA—4 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Down the Danube to Vienna*: following the longest river in Europe from its source—views of villages, ruins and castles along its banks—scenes in Vienna—troops, the Archduke Charles and the imperial palace.

Reel 2, *In Innsbruck*: views of a quaint city with dogcarts and in-

teresting native life—buildings and parks of the city and the surrounding mountains—a procession of honor—folk dances.

Reel 3, *In South Tirol*: Lake Garda and its lemon orchards—procession of Corpus Christi—a mountain railway and Stelvio, the highest crossroads of the Alps—the meeting point of Italy, Austria and Switzerland, 12,000 feet high—Ortler Peak.

Reel 4, *Climbing the Austrian Alps*: the dangers as well as the joys of mountain climbing; the city of Salzburg.

BELGIUM—9 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Mirrors of Nature*: artistic and beautiful scenes reflected in the calm waters of famous rivers and canals in Belgium, France, and Germany.

Reel 2, *Belgium Smiles Again*: views of the ruined city of Dinant on the Meuse—unharmed Ostende and its beach, one of the world's great resorts.

Reel 3, *Bustling Brussels*: the Royal Palace—the Bourse and Boulevard life—the making of fine lace—views of the Palace of Justice—guild houses—the city hall.

Reel 4, *Martyred Cities*: showing the devastation of war in the French and Belgian cities of Ypres, Arras, Verdun, and Rheims.

Reel 5, *Artistic Antwerp*: the Cathedral and boulevards—Brabo Fountain and Rubens' Monument—art galleries and parks—harbor works along the Scheldt and the funeral cortège of a city councilor.

Reel 6, *Beautiful Bruges*: the beautiful canals and bridges of the Flemish Venice—the German submarine base—the belfry and city hall.

Reel 7, *In Flanders*: ineradicable marks left by the war—Flanders Fields—ruined Dixmude and scenes along the Yser—Ghent and the room where the treaty of the War of 1812 was signed—the Grand Beguinage of Ghent.

Reel 8, *Heroic Liège*: where the World War began—the River Meuse—the devastation caused by the great guns—the shattered Fort of Loncin—Malines and the Cathedral of Cardinal Mercier.

Reel 9, *In Rural Belgium*: Views of a country that is still like a child's picture book—dogcarts—windmills—wooden shoes—strange costumes—the village of Wortel—a picturesque festival for returning soldiers.

CHASE, THE—(SKI RUNNING IN THE ALPS)—*Educational Film Exchanges, Inc. 729 7th Avenue, New York City.*
Fifty of the world's champion ski-jumpers, performing their greatest

338 MOTION PICTURES FOR INSTRUCTION

feats of skill and daring, make this film a thrilling one. Photographed near St. Moritz in the Alps.

CHATEAUX OF FRANCE—*Society for Visual Educational, Inc., 327 S. LaSalle St., Chicago, Ill.*

Views of some of the beautiful and historic castles of France—a Moravian wedding and celebration are included.

CHEDDAR AND GLASTONBURY—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A pilgrimage to Glastonbury and its ancient abbey, the cradle of Christianity in England—the village of Cheddar, the home of Cheddar Cheese.

COACHING THROUGH CONWAY IN WALES—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A beautiful scenic of the Welsh country.

CZECHOSLOVAKIA—5 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *The Real Bohemia*: the Sokols or great gymnastic meets—the home of Kubelik—peasant life and native dances.

Reel 2, *In Picturesque Prague*: views in the old city with the narrow streets and the Rathouse and the 15th century clock—the great buildings of the new city—where the famous Bohemian glass is made—laborers and soldiery—scenes along the Vetava River and the mountains outside the city.

Reel 3, *From Carlsbad to Moravia*: the great health wells at Carlsbad and Marienbad—dog-drawn carts—the life, costumes and dances of the peasants.

Reel 4, *Present-Day Prague*: the Hradstany—the Tyn Church—the National Theatre—the Charles Bridge—the Cathedral of St. Vitus and the River Vetava.

Reel 5, *Country Life in Bohemia*: scenic beauty and the rich, cultivated lands—cattle and crops—villagers at work and play—native dances.

ENGLAND—12 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *The Sunny South of England*: Land's End—Ilfracombe—Falmouth—Looe—Torquay—Weymouth—Bournemouth.

Reel 2, *Glimpses of English Town and Country*: Stonehenge—Wells Cathedral—Salisbury—Oxford—Cambridge—Stratford.

Reel 3, *With the American Y. M. C. A. in London*: American soldiers in England—Eagle Hut and the Washington Inn which was opened by the Duke of Connaught—Fourth of July in London.

Reel 4, *St. Dunstan's Happy Blind*: the university for the sightless in London—Otto Kahn's mansion turned into a training school for blinded soldiers—work of the blind.

Reel 5, *The War Women of England*: Trafalgar Square—Florence Nightingale—Army Service Corps—window washers—bus and aëro workers—3,000 war workers at Buckingham Palace.

Reel 6, *London Plays Ball*: British Royalty and nobility witness a game of baseball between the U. S. Army and Navy.

Reel 7, *Seeing Sightings in London*: Westminster Abbey—Houses of Parliament—the Horse Guards—No. 10 Downing Street—the Catholic Cathedral—Whitehall—Admiralty Arch—Fire Monument—Guildhall—St. Mary-le-Bow—St. Paul's.

Reel 8, *Some British Bits Well Done*: a school for Army Cooks—an aviation camp—a tank garage—a war-dog college.

Reel 9, *With Uncle Sam's Submarine Chasers*: whence the Mayflower sailed—Francis Drake and the Bowling Green—submarine chasers dropping depth bombs—sea geysers—Admiral Sims.

Reel 10, *Around About London*: the Thames at Richmond—Windsor Castle—Hampton Court—Aboard a Houseboat—the Thames in London—Houses of Parliament—Lambeth—the Embankment—Street traffic, 1902 to 1918.

Reel 11, *From Blarney to Broadstairs*: the feat of kissing the famous stone—Queenstown—the Lusitania graves—a Ford for cranking aëroplanes—in Plymouth Harbor—Lord Northcliffe.

Reel 12, *A Fairy Foreland*: a picturization of Tennyson's poem "The Brook."

FRANCE—28 reels—*Burton Holmes Lectures, Inc.*, 7510 N. Ashland Ave., Chicago, Ill.

Reel 1, *Gay Paree in Wartime*: the Paris Opera—the Champs Élysées—Arch of Triumph—Notre Dame—the Hotel des Invalides—Guynemer's plane—Napoleon's tomb—the Louvre.

Reel 2, *Glorious Versailles*: the palace and gardens of the home of the Bourbon Kings—the Grand Trianon—Le Petit Trianon—the 14th of July in Paris, 1918 (Bastille Day).

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Reel 3, *With the Yanks in France*: Crusaders in Orleans—Joan of Arc—aviators at Issoudun—American locomotives—the S. O. S. at Tours and the Cathedral—army bakery at Dijon.

Reel 4, *Across France with the Yankee "Gas Hounds"*: St. Nazaire—Saumur—the Castle of Angers—the ancient drawbridge—The Loire River—Amboise—Bloise—the Château—convoys to the front.

Reel 5, *Château-Thierry and Beyond*: with the Yanks near the front in July 1918—German loot—the berth of a Big Bertha—artillery in action—camouflage and filmed history.

Reel 6, *American Women in France*: American fund for French wounded—American Hospitals at Neuilly—tent hospital at Auteuil—nurses—Young Women's Christian Association—Aix-les-Bains—"Y" Girls.

Reel 7, *The Miracle of Montoir*: the building of the supply depot near St. Nazaire—a polyglot army of laborers—the service of supply.

Reel 8, *Salvation Army on the Job*: Commander Evangeline Booth—the passage and in the War Zone—the McAllister Sisters—opening a canteen—meetings near the front—on the edge of the Argonne.

Reel 9, *Paris, the Magnificent*: the Eiffel Tower—Arch of Triumph—Alexander Bridge—the art palaces and the Place de la Concorde—Madeleine—the Opéra—Café de la Paix—the Boulevards and the Seine—Notre Dame—Cluny—Luxembourg—Pantheon—Sacré Cœur.

Reel 10, *The Doughnut That Did It*: the war service of the doughnut—the epidemic—a doughnut factory at the front.

Reel 11, *Uncle Sam, Salvager*: the great salvage plant of the A. E. F. at Tours—salvaging 100 million dollars worth of materials—mountains of clothing—the world's biggest tailor shop—millions of socks and shoes.

Reel 12, *In the Basque Country*: the French slopes of the Pyrenees—the land of Loyola and Francis Xavier—the game of pelota—the world's smallest republic, Andorra, and its president—mountain scenery and waterfalls.

Reel 13, *In Brittany*: the land of sincere piety—the Fair at La Faouet—the Pardon of Ste. Barbe—the Pardon of Our Lady of Baud—Pont Aven.

Reel 14, *Mirrors of Nature*: described as Reel 1 under Belgium.

Reel 15, *Parisian Faces and Figures*: striking studies of French physiognomies; superb panoramas from the Eiffel Tower.

Reel 16, *Martyred Cities*: described as Reel 4 under Belgium.

Reel 17, *Battlefields of France*: the ruined coal mines of the Lens Basin—Chinese Labor Corps at play—Fort of La Pompelle near Rheims—a tank in a trench; German prisoners at work.

Reel 18, *A Gold Star Pilgrimage*: to the battlefields of Château-

Thierry—Belleau Wood—the Village of Vaux—the Argonne—22,000 crosses in the American Cemetery at Romagne.

Reel 19, *Parisian Holidays*: the 14th of July in Paris, 1918 and 1919, and the transition from despair to victory—the 4th of July in the Pershing Stadium.

Reel 20, *The Land of Pardons*: scenes in Brittany—curious costumes and caps—making wooden shoes—the pardon of St. Anne of Auray—four Bishops in procession.

Reel 21, *Pyrenean Perspectives*: penetrating the Pyrenees by trolley—mountain hamlets and holy places—valleys and peaks.

Reel 22, *In Finistère*: the Sardine Fleet—the pilgrimage to St. Roman's shrine—the pardon of St. John of the Finger—Brittany costumes and bridal gowns.

Reel 23, *The Snow-Bound Pyrenees*: midwinter scenes in the mountains—hiking in a storm—the Cirque of Gavarnie.

Reel 24, *Bordeaux to Lourdes*: a rainy day in Bordeaux—fox hunting in the sunshine—the basilica and the grotto of Bernadette at Lourdes.

Reel 25, *Along the Riviera*: roads and beaches and cities of the Azure Coast of France.

Reel 26, *Monte Carlo*: the principality of Monaco—the castle of the Prince—Street scenes—pigeon shooting—the great pleasure houses—the Casino—its gaming tables and the terraces and gardens.

Reel 27, *Marseilles*: France's great Mediterranean seaport—views of the harbor and Cannebière—the "Transbordeur" Bridge and the Funicular to Notre Dame de la Garde.

Reel 28, *Nice and Cannes*: pleasure cities of the Riviera showing the Casinos, Cafés, Parks, Gardens and the "Battle of Flowers."

FROM LONDON TO PARIS BY AIR—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

Unusual photographs of the English Channel and the cities and towns, as well as natural scenery, en route from London to Paris.

GERMANY—10 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Imperial Berlin*: a voyage from Hoboken, U. S. A., to the harbor and to the City of Berlin—famous streets—buildings—gardens—monuments—the soldiers and the emperor.

Reel 2, *The Spreewald near Berlin*: life on the River Spree—quaint costumes of the people of the forest—Nuremberg—an English boat-race at old Heidelberg.

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Reel 3, *Munich, the Magnificent*: views of the streets and buildings of the Bavarian capital—women laborers and children playing among flocks of tame pigeons—the Isar River and the Corpus Christi procession—King of Bavaria.

Reel 4, *In Beautiful Bavaria*: quaint peasants—tourists in the salt mine—the River of Acke and the Koenigs See—Germany's most beautiful lake—the Austrian Tirol.

Reel 5, *Mirrors of Nature*: described as Reel 1 under Belgium.

Reel 6, *Yankee Watch on the Rhine*: the American occupation of Coblenz—the Flag on Castle Ehrenbreitstein—the bridge of boats—U. S. troops on parade.

Reel 7, *The Franco-British Rhine*: the Rhine Bridge at Worms—the Senegalese Watch on the Rhine at Mainz—Rudesheim—the Germania monument—British soldiers at Cologne and the great cathedral.

Reel 8, *The Lure of the Lorelei*: the Rhine from Bonn to Bingen—Drachenfels—Andernach—castles of the Rhine and the Rock of the Lorelei—the Pfalz and Rheinstein.

Reel 9, *The Sentence of the Sarre*: Described as Reel 5 under France.

Reel 10, *Moselle Memories*: the Moselle River from Treves to Cochem; vertical vineyards; views of the valleys and hills; American graves in the churchyard at Cochem.

GREECE—2 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *In Classic Greece*: Patras—Eleusis—through the Corinthian Canal—Piraeus—Athens—the Acropolis—Evzones on parade—high diving at Phaleron.

Reel 2, *In Modern Athens*: the great Stadium—the Olympic Games and the Marathon Race.

HAMPTON COURT PALACE—1 reel—*Carter Cinema Producing Corporation, % Evans Film Laboratories, 1476 Broadway, New York City.*

Views of the historic structures; great chambers of the palace; the grounds, vine arbor, lily ponds, and old English gardens.

IN OLD ENGLAND—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

Views of the populous island where every foot of soil is cultivated and landscaped—English roads and quaint houses—the banks of the Thames and its bridges and locks.

IRELAND—3 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *A Scotch-Irish Reel*: shearing Cheviot sheep—a school in the Selkirk hills—Crinan Canal—the Isle of Skye—Staffa—Gingal's Cave—Iona—Belfast Volunteers.

Reel 2, *In Old Ireland*: Belfast and Dublin—the Horse Show—Glen-dalough—Achill Island—the Ballybunion Mono Railway.

Reel 3, *From Blarney to Broadstairs*: described as Reel 11 under England.

ITALY—7 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Southern Italy*: Naples—pilgrims from Monte Vergine—Sorrento—the Tarantella—Corpus Christi in Amalfi.

Reel 2, *The Island of Capri*: famous dancers—festival of San Costanzo—the Blue Grotto—warnings from Vesuvius.

Reel 3, *Vesuvius in Eruption*: actual volcanic activity—rains of ashes and cinders—rivers of Lava—crushed villages—refugees—Pompeii.

Reel 4, *From the Tiber to the Piave*: St. Peter's—Castle of St. Angelo—The Coliseum—the Forum—scenes of Rome—front line trenches.

Reel 5, *A Day in Florence*: Along the Arno—the Duomo—the Ponte Vecchio—physical exercises of the war-wounded soldiers.

Reel 6, *All Aboard for Brindisi*: Egypt to Italy—leaving Alexandria—interesting fellow passengers—Brindisi—the terminal pillars of the Appian Way—up the Adriatic.

Reel 7, *Lake Maggiore*: views of northern Italy and the Alps—hanging gardens—Borromean archipelago—Arona—Castle of Borromean.

NORWAY—1 reel—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Bergen—by cariole through the Romsdal—a canal boat in the Tele-marken Canal—the Great Fjords—Hammerfest—Bird Rock—natives of Lapland.

OLD LONDON—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

Mansion House—Guildhall—Bank of England—Ludgate Circus—St. Paul's Cathedral.

OLD SPAIN—*Fox Film Corporation, 10th Ave. and 55th St.,*

344 MOTION PICTURES FOR INSTRUCTION

New York City, and 910 S. Wabash Ave., Chicago, Ill.

Beautiful and historic points in Granada and scenes showing the life and customs of the natives.

PARIS THE BEAUTIFUL—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Views of the buildings, monuments, boulevards, and parks of Paris.

PORTUGAL—1 reel—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Madrid to Madeira: life in the Spanish capital and in Lisbon—a bloodless Portuguese bullfight—Funchal in Madeira—coasting in the tropics.

SCOTLAND—3 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Glasgow to Edinboro:* the Clyde River—the Trossachs—Loch Lomond—Edinboro Castle—Prince's Street—the arrival of the King and Queen.

Reel 2, *Bonnie Scotland:* the Forth Bridge—Aberdeen—through the Caledonian Canal—the Locks of Fort Augustus.

Reel 3, *A Scotch-Irish Reel:* described as Reel 1 under Ireland.

SCULPTOR'S PARADISE, A—CARRARA, ITALY—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

The marble quarries of Carrara, the village, the workers—views of famous masterpieces of architecture, memorials, etc., made of Carrara marble. An unusually beautiful and instructive picture.

SPAIN—9 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Madrid to Madeira:* described as Reel 1 under Portugal.

Reel 2, *Palma de Majorca:* the capital of the Balearic Islands—señoritas wearing the "Rebozillo"—motoring in Majorca—views of natives, convents, old olive groves—a she-goat suckling a baby.

Reel 3, *In New Madrid:* views of the modern city—the post office—the Square of Puerta del Sol, the center of the city—monuments and military display.

Reel 4, *Spanish Children:* Children of the cities of Seville and Granada

and the villages of Andalusia—peasant children—the costumed children of the plutocracy at the Feria.

Reel 5, *In Barcelona*: views of the harbor and city—the Columbus Column—a religious procession—the Rambla promenade.

Reel 6, *Spanish Holidays*: A county fair in Seville showing the picturesque costumes and prize cattle—a royal birthday celebration in Madrid—Spanish notables.

Reel 7, *Toledo and Segovia*: views of the great Roman Aqueduct at Toledo—monuments, streets, churches of both cities.

Reel 8, *Seville in Fair Time*: burial place of Columbus—the present Queen of Spain—the bull-ring and other points of interest—Spanish girls dancing, donning the mantillas, etc.

Reel 9, *In Old Granada*: the old Moorish city with views of Alhambra Hill—cave dwellings of the gypsies—the River Darro and the Court of Myrtles and Zions.

A TRIP UP THE SEINE—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

Views of the industries lining the great waterway, the Cathedral of Notre Dame, bridges, government buildings and markets of Paris as seen from the river.

RED CROSS FILMS

Society for Visual Education, Inc., 327 S. LaSalle St.,

Chicago, Ill.

SCHOOL CORRESPONDENCE.

Florence, Italy—Rome—Naples—Sezze Romano—Greece—Constantinople—Venice—Roumania—In Prague—France—Belgium—Czechoslovakia—Albania—Montenegro—France—The Sahara—Italy's Sons of the Sea—America Junior (2 reels).

LITTLE JOURNEYS THROUGH OTHER LANDS.

Normandy—Tatra—Brittany—Poland—Zuider Zee—Venice—Riviera—Marseilles—Quaint Rouen, France.

MISCELLANEOUS RED CROSS FILMS

Amid Archangel Snows—The Balkans—Queen of Roumania—Heroes All—Serbia—Fall of Kiev—Over the Soviet Line—

346 MOTION PICTURES FOR INSTRUCTION

Czechoslovakia—Spirit of Service—Mrs. Brown versus the High Cost of Living—Every Swimmer a Life Saver—Vocational Training for Blind Soldiers—Russia—The Boy Scout and His Uniform.

POST TRAVEL PICTURES

Chadwick Pictures Corporation, 729 7th Ave., New York City.

CHILDREN OF OTHER LANDS.

Children of Holland—Children of Serbia—Children of Poland—Children of Scandinavia—Children of Bohemia—Children of Hungary—Children of The Balkans—Children of Germany—Children of Roumania.

IN OTHER LANDS.

Hungary—Lapland—Norway—Greece—Southern Europe—Roumania—Bohemia—Sweden—Poland—Serbia—Holland—The Balkans—Austria—Germany—Italy—French Riviera.

WEST INDIES

BERMUDA—2 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Beautiful Bermuda*: the city of Hamilton and its environs from an airplane—tent pegging at Government House.

Reel 2, *A Little Atlantis*: the Bermudas and their submerged coral reefs from the air—St. George Frascati—Racing dinghys.

CUBA—2 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Nature's Contrasts*: a comparison of New England snow scenes and tropic Cuban scenes, titled with verse.

Reel 2, *Under Cuban Skies*: Havana—its harbor, boulevards, clubs, palaces and cathedral.

ST. THOMAS, UNCLE SAM'S NEW WARD—1 reel—*American Motion Picture Corp., 126 W. 46th St., New York City.*

The Caribbean Island and the changes made in it since under United States protection.

TOILERS OF THE EQUATOR—(COFFEE AND HEMP)—*Fox Film Corporation, 10th Ave., and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

The growing of coffee and hemp and their preparation for shipment, in the Kenva colony.

WEST INDIES—1 reel—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Tropical Nassau: glimpses of Port of Spain in Trinidad and of Barbados—fashions and dancing in Nassau—opening palm buds—pelicans at play.

OTHER ISLANDS

AUSTRALIA—9 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Sydney, the Antipodean Metropolis:* Sydney Harbor and Sydney Head—the Circular Quay—Australian skyscrapers and parks.

Reel 2, *A Trip to the Jenolan Caves of Australia:* by rail to Hawkesbury Agricultural College—the Grand Canyon of Katoomba—the Great Arch in the Caverns—views of Sydney.

Reel 3, *Melbourne, the Magnificent:* the people, buildings, streets, and parks of the capital city of New South Wales.

Reel 4, *Round About Melbourne:* interesting scenes showing the Cup, Sports, a Dog Show, Tag Day, and Mme. Melba at home at Coombe Cottage.

Reel 5, *Adelaide, Capital of South Australia:* the third largest city—views and up-to-date items—Australian volunteers.

Reel 6, *Round About Adelaide:* young Australians and Australian swimmers—homes and vineyards—the seashore and the races—eucalyptus and sheep.

Reel 7, *Hunting Kangaroos from Motor Cars:* kangaroo close-ups in the Zoo—the emu bird—exciting motor pursuit of wild kangaroos—baby kangaroos in the pouch—Australian swimmers.

Reel 8, *Along the Queensland Coast:* Sydney to Brisbane by sea—

348 MOTION PICTURES FOR INSTRUCTION

Townsville—a "Blackfellow" camp—the Aboriginal Australians and the stolid blacks of the Never-Never Land.

Reel 9, *The Cruise of the Aki Maru*: a trip from China to Australia—ship life and the ingenious ways of the Jap tars—crossing the Equator—Father Neptune comes aboard—good comedy at sea.

FIJI ISLANDS—5 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Sailing the South Seas to Fiji*: aboard the Niagara—Suva the capital—faces and figures of the islanders—sports and dancing the Meke-meke for Mme. Melba on the deck.

Reel 2, *Sights of Suva*: life and labor in Suva—giant turtles—the constabulary—church parade—tropical scenery.

Reel 3, *Methodized Cannibals*: along the tropic rivers—converted native children—a Methodist mission—the "Lali" as a church bell—a native village.

Reel 4, *Fiji Does Its Bit*: the rubber and banana industries—native labor corps starting for France—farewell ceremony at Suva and ashore at Honolulu.

Reel 5, *Fire Walkers at Beqa*: unique pictures of an ancient and rarely performed sacred rite of the Fiji Islanders—terrifying war dance—actual walking upon superheated stones.

NEW ZEALAND—5 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Auckland, the Metropolis of New Zealand*: views of the city—the Grafton Bridge—Mount Eden—Ellerslie race course—boat-races—beside the silver sea.

Reel 2, *Rotorua, the Yellowstone of the Antipodes in New Zealand*: the Government baths—Wakarewarewa—hot springs and geysers—Maori children—Wairaki—the great Waimangu geyser—after the outburst—a unique inn.

Reel 3, *Among the Maoris of New Zealand*: the Polynesian population—Maori art and architecture—the ancient native fort—tattooed heads—the "tiki"—rubbing noses—the poi dance—the haka-haka.

Reel 4, *Wellington and the North Island of New Zealand*: views of Napier—New Plymouth—Mount Edmont—the Wanganui River—kauri trees—apples—tomatoes—prize cattle on parade.

Reel 5, *Down South in New Zealand*: the city of Christchurch in the South Island—Scottish dances in Dunedin—mid-winter seaside resorts—Lake Wakatipu—Skipper's Gorge—Maori sports—hurdling in canoes.

SAMOA—2 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Today in Samoa*: the harbor at 'Apia—Vailima; Stevenson's home—tomb of Tusitala—Samoan cocoanuts—making copra—dancing the siva-siva.

Reel 2, *Yesterdays in Samoa*: pictures of old Samoan life that cannot be duplicated today—a "king's kava ceremony"—the taupa girls—ancient war dance—Ella Wheeler Wilcox distributing leis.

MOANA OF THE SOUTH SEAS—6 reels—*Famous Players-Lasky, 485 Fifth Ave., New York City.*

Not primarily designed for the classroom, but one of the greatest geographical films ever produced.

TASMANIA—1 reel—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Cape Raoul—the Tasman Peninsula—Hobart, the capital—seeing the town by tram—a country school—the Russell Falls—the Tamar River.

TONGA ISLANDS—1 reel—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Cave of the Swallows—Vavau—Haapai—Nukualofa—making tapa—the King of Tonga—dancing the laka-laka—South Sea surf.

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Reel 3, *Surabaya, the Busy Burg of Java*: the commercial metropolis of the Dutch East Indies.

Reel 4, *In the Garden of the East*: glimpses of the Island of Java—Batavia—gardens of Buitenzorg—sugar fields—strolling entertainers.

Reel 5, *A Polynesian Odyssey*: unusual pictures of Bali and its people.

Reel 6, *Boro-Bodor and the Bromo*: the great carved pyramid of Boro-Bodor and active volcanic crater of Bromo, smoking in the "Sand Sea."

350 MOTION PICTURES FOR INSTRUCTION

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Reel 8, *Rural Java*: farming and gathering of Kapok—cultivation of chinchona trees—rice cultivation.

Reel 9, *Watching the Wayangs*: town of Djokgakarta—the filmless movies of the Orient, shadow pictures—the archery of aristocrats—town of Surabaya.

PHILIPPINES—31 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Old and New Manila*: the Manila of 1913—the New Luneta—Rizal Monument—Army and Navy Club—Ernita Y. M. C. A.—old walled city.

Reel 2, *Bilibid, the Sing Sing of the Philippines*: a model prison in Manila—the military drill—how the prisoners are fed—the Bilibid band.

Reel 3, *The Pasig River*: the waterfront in Manila and the suburbs—the upper portion of the river and beautiful scenery.

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Reel 8, *Cruising Through the Philippines*: on a Coast Guard cutter—Romblon—Leyte—Iloilo—Cebu—Zamboanga—San Romon Prison.

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Reel 10, *Visiting the Sultan of Sulu*: Jolo, chief city of the Sulu Islands—views of the Sultan and curious customs.

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make lace—Red Cross work in Manila—the annual carnival and children's day—the candidates for the queenship.

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Reel 21, *Zamboanga, General Pershing's Headquarters in the Philippines*: the chief city of Mindanao—modern Zambo—plazas and boulevards—Mayor Brown and his Orangoutang.

Reel 22, *Filipino School Days*: Aguinaldo in his town home—high school cadets—a field day—dances of the nations—drills and exercises.

Reel 23, *Tagalog Toilers*: the rice industry—the salt industry—cacao—breadfruit—papayas.

Reel 24, *Frocks and Frills of the Filipinas*: costumes of the young women of Manila—social amenities of the Tagalog upper classes—heiresses of Philippine culture.

Reel 25, *Up-to-date Manila*: the modernized capital—clubs—high buildings—rapid transit—fire tugs in action—a Manila sunset.

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A TRIP UP THE SEINE—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

Views of the industries lining the great waterway, the Cathedral of Notre Dame, bridges, government buildings and markets of Paris as seen from the river.

RED CROSS FILMS

Society for Visual Education, Inc., 327 S. LaSalle St.,

Chicago, Ill.

SCHOOL CORRESPONDENCE.

Florence, Italy—Rome—Naples—Sezze Romano—Greece—Constantinople—Venice—Roumania—In Prague—France—Belgium—Czechoslovakia—Albania—Montenegro—France—The Sahara—Italy's Sons of the Sea—America Junior (2 reels).

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MISCELLANEOUS RED CROSS FILMS

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346 MOTION PICTURES FOR INSTRUCTION

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POST TRAVEL PICTURES

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Reel 2, *A Little Atlantis*: the Bermudas and their submerged coral reefs from the air—St. George Frascati—Racing dinghys.

CUBA—2 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Nature's Contrasts*: a comparison of New England snow scenes and tropic Cuban scenes, titled with verse.

Reel 2, *Under Cuban Skies*: Havana—its harbor, boulevards, clubs, palaces and cathedral.

ST. THOMAS, UNCLE SAM'S NEW WARD—1 reel—*American Motion Picture Corp., 126 W. 46th St., New York City.*

The Caribbean Island and the changes made in it since under United States protection.

TOILERS OF THE EQUATOR—(COFFEE AND HEMP)—*Fox Film Corporation, 10th Ave., and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

The growing of coffee and hemp and their preparation for shipment, in the Kenva colony.

WEST INDIES—1 reel—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Tropical Nassau: glimpses of Port of Spain in Trinidad and of Barbados—fashions and dancing in Nassau—opening palm buds—pelicans at play.

OTHER ISLANDS

AUSTRALIA—9 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Sydney, the Antipodean Metropolis:* Sydney Harbor and Sydney Head—the Circular Quay—Australian skyscrapers and parks.

Reel 2, *A Trip to the Jenolan Caves of Australia:* by rail to Hawkesbury Agricultural College—the Grand Canyon of Katoomba—the Great Arch in the Caverns—views of Sydney.

Reel 3, *Melbourne, the Magnificent:* the people, buildings, streets, and parks of the capital city of New South Wales.

Reel 4, *Round About Melbourne:* interesting scenes showing the Cup, Sports, a Dog Show, Tag Day, and Mme. Melba at home at Coombe Cottage.

Reel 5, *Adelaide, Capital of South Australia:* the third largest city—views and up-to-date items—Australian volunteers.

Reel 6, *Round About Adelaide:* young Australians and Australian swimmers—homes and vineyards—the seashore and the races—eucalyptus and sheep.

Reel 7, *Hunting Kangaroos from Motor Cars:* kangaroo close-ups in the Zoo—the emu bird—exciting motor pursuit of wild kangaroos—baby kangaroos in the pouch—Australian swimmers.

Reel 8, *Along the Queensland Coast:* Sydney to Brisbane by sea—

Townsville—a "Blackfellow" camp—the Aboriginal Australians and the stolid blacks of the Never-Never Land.

Reel 9, *The Cruise of the Aki Maru*: a trip from China to Australia—ship life and the ingenious ways of the Jap tars—crossing the Equator—Father Neptune comes aboard—good comedy at sea.

FIJI ISLANDS—5 reels—Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.

Reel 1, *Sailing the South Seas to Fiji*: aboard the Niagara—Suva the capital—faces and figures of the islanders—sports and dancing the Meke-meke for Mme. Melba on the deck.

Reel 2, *Sights of Suva*: life and labor in Suva—giant turtles—the constabulary—church parade—tropical scenery.

Reel 3, *Methodized Cannibals*: along the tropic rivers—converted native children—a Methodist mission—the "Lali" as a church bell—a native village.

Reel 4, *Fiji Does Its Bit*: the rubber and banana industries—native labor corps starting for France—farewell ceremony at Suva and ashore at Honolulu.

Reel 5, *Fire Walkers at Beqa*: unique pictures of an ancient and rarely performed sacred rite of the Fiji Islanders—terrifying war dance—actual walking upon superheated stones.

NEW ZEALAND—5 reels—Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.

Reel 1, *Auckland, the Metropolis of New Zealand*: views of the city—the Grafton Bridge—Mount Eden—Ellerslie race course—boat-races—beside the silver sea.

Reel 2, *Rotorua, the Yellowstone of the Antipodes in New Zealand*: the Government baths—Wakarewarewa—hot springs and geysers—Maori children—Wairaki—the great Waimangu geyser—after the outburst—a unique inn.

Reel 3, *Among the Maoris of New Zealand*: the Polynesian population—Maori art and architecture—the ancient native fort—tattooed heads—the "tiki"—rubbing noses—the poi dance—the haka-haka.

Reel 4, *Wellington and the North Island of New Zealand*: views of Napier—New Plymouth—Mount Edmont—the Wanganui River—kauri trees—apples—tomatoes—prize cattle on parade.

Reel 5, *Down South in New Zealand*: the city of Christchurch in the South Island—Scottish dances in Dunedin—mid-winter seaside resorts—Lake Wakatipu—Skipper's Gorge—Maori sports—hurdling in canoes.

Thierry—Belleau Wood—the Village of Vaux—the Argonne—22,000 crosses in the American Cemetery at Romagne.

Reel 19, *Parisian Holidays*: the 14th of July in Paris, 1918 and 1919, and the transition from despair to victory—the 4th of July in the Pershing Stadium.

Reel 20, *The Land of Pardons*: scenes in Brittany—curious costumes and caps—making wooden shoes—the pardon of St. Anne of Auray—four Bishops in procession.

Reel 21, *Pyrenean Perspectives*: penetrating the Pyrenees by trolley—mountain hamlets and holy places—valleys and peaks.

Reel 22, *In Finistère*: the Sardine Fleet—the pilgrimage to St. Roman's shrine—the pardon of St. John of the Finger—Brittany costumes and bridal gowns.

Reel 23, *The Snow-Bound Pyrenees*: midwinter scenes in the mountains—hiking in a storm—the Cirque of Gavarnie.

Reel 24, *Bordeaux to Lourdes*: a rainy day in Bordeaux—fox hunting in the sunshine—the basilica and the grotto of Bernadette at Lourdes.

Reel 25, *Along the Riviera*: roads and beaches and cities of the Azure Coast of France.

Reel 26, *Monte Carlo*: the principality of Monaco—the castle of the Prince—Street scenes—pigeon shooting—the great pleasure houses—the Casino—its gaming tables and the terraces and gardens.

Reel 27, *Marseilles*: France's great Mediterranean seaport—views of the harbor and Cannebière—the "Transbordeur" Bridge and the Funicular to Notre Dame de la Garde.

Reel 28, *Nice and Cannes*: pleasure cities of the Riviera showing the Casinos, Cafés, Parks, Gardens and the "Battle of Flowers."

FROM LONDON TO PARIS BY AIR—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

Unusual photographs of the English Channel and the cities and towns, as well as natural scenery, en route from London to Paris.

GERMANY—10 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Imperial Berlin*: a voyage from Hoboken, U. S. A., to the harbor and to the City of Berlin—famous streets—buildings—gardens—monuments—the soldiers and the emperor.

Reel 2, *The Spreewald near Berlin*: life on the River Spree—quaint costumes of the people of the forest—Nuremberg—an English boat-race at old Heidelberg.

342 MOTION PICTURES FOR INSTRUCTION

Reel 3, *Munich, the Magnificent*: views of the streets and buildings of the Bavarian capital—women laborers and children playing among flocks of tame pigeons—the Izar River and the Corpus Christi procession—King of Bavaria.

Reel 4, *In Beautiful Bavaria*: quaint peasants—tourists in the salt mine—the River of Acke and the Koenigs See—Germany's most beautiful lake—the Austrian Tirol.

Reel 5, *Mirrors of Nature*: described as Reel 1 under Belgium.

Reel 6, *Yankee Watch on the Rhine*: the American occupation of Coblenz—the Flag on Castle Ehrenbreitstein—the bridge of boats—U. S. troops on parade.

Reel 7, *The Franco-British Rhine*: the Rhine Bridge at Worms—the Senegalese Watch on the Rhine at Mainz—Rudesheim—the Germania monument—British soldiers at Cologne and the great cathedral.

Reel 8, *The Lure of the Lorelei*: the Rhine from Bonn to Bingen—Drachenfels—Andernach—castles of the Rhine and the Rock of the Lorelei—the Pfalz and Rheinstein.

Reel 9, *The Sentence of the Sarre*: Described as Reel 5 under France.

Reel 10, *Moselle Memories*: the Moselle River from Treves to Cochem; vertical vineyards; views of the valleys and hills; American graves in the churchyard at Cochem.

GREECE—2 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *In Classic Greece*: Patras—Eleusis—through the Corinthian Canal—Piraeus—Athens—the Acropolis—Evzones on parade—high diving at Phaleron.

Reel 2, *In Modern Athens*: the great Stadium—the Olympic Games and the Marathon Race.

HAMPTON COURT PALACE—1 reel—*Carter Cinema Producing Corporation, % Evans Film Laboratories, 1476 Broadway, New York City.*

Views of the historic structures; great chambers of the palace; the grounds, vine arbor, lily ponds, and old English gardens.

IN OLD ENGLAND—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

Views of the populous island where every foot of soil is cultivated and landscaped—English roads and quaint houses—the banks of the Thames and its bridges and locks.

IRELAND—3 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *A Scotch-Irish Reel*: shearing Cheviot sheep—a school in the Selkirk hills—Crinan Canal—the Isle of Skye—Staffa—Gingal's Cave—Iona—Belfast Volunteers.

Reel 2, *In Old Ireland*: Belfast and Dublin—the Horse Show—Glen-dalough—Achill Island—the Ballybunion Mono Railway.

Reel 3, *From Blarney to Broadstairs*: described as Reel 11 under England.

ITALY—7 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Southern Italy*: Naples—pilgrims from Monte Vergine—Sorrento—the Tarantella—Corpus Christi in Amalfi.

Reel 2, *The Island of Capri*: famous dancers—festival of San Costanzo—the Blue Grotto—warnings from Vesuvius.

Reel 3, *Vesuvius in Eruption*: actual volcanic activity—rains of ashes and cinders—rivers of Lava—crushed villages—refugees—Pompeii.

Reel 4, *From the Tiber to the Piave*: St. Peter's—Castle of St. Angelo—The Coliseum—the Forum—scenes of Rome—front line trenches.

Reel 5, *A Day in Florence*: Along the Arno—the Duomo—the Ponte Vecchio—physical exercises of the war-wounded soldiers.

Reel 6, *All Aboard for Brindisi*: Egypt to Italy—leaving Alexandria—interesting fellow passengers—Brindisi—the terminal pillars of the Appian Way—up the Adriatic.

Reel 7, *Lake Maggiore*: views of northern Italy and the Alps—hanging gardens—Borromean archipelago—Arona—Castle of Borromean.

NORWAY—1 reel—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Bergen—by cariole through the Romsdal—a canal boat in the Tele-marken Canal—the Great Fjords—Hammerfest—Bird Rock—natives of Lapland.

OLD LONDON—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

Mansion House—Guildhall—Bank of England—Ludgate Circus—St. Paul's Cathedral.

OLD SPAIN—*Fox Film Corporation, 10th Ave. and 55th St.,*

344 MOTION PICTURES FOR INSTRUCTION

New York City, and 910 S. Wabash Ave., Chicago, Ill.

Beautiful and historic points in Granada and scenes showing the life and customs of the natives.

PARIS THE BEAUTIFUL—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Views of the buildings, monuments, boulevards, and parks of Paris.

PORTUGAL—1 reel—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Madrid to Madeira: life in the Spanish capital and in Lisbon—a bloodless Portuguese bullfight—Funchal in Madeira—coasting in the tropics.

SCOTLAND—3 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Glasgow to Edinboro:* the Clyde River—the Trossachs—Loch Lomond—Edinboro Castle—Prince's Street—the arrival of the King and Queen.

Reel 2, *Bonnie Scotland:* the Forth Bridge—Aberdeen—through the Caledonian Canal—the Locks of Fort Augustus.

Reel 3, *A Scotch-Irish Reel:* described as Reel 1 under Ireland.

SCULPTOR'S PARADISE, A—CARRARA, ITALY—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

The marble quarries of Carrara, the village, the workers—views of famous masterpieces of architecture, memorials, etc., made of Carrara marble. An unusually beautiful and instructive picture.

SPAIN—9 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Madrid to Madeira:* described as Reel 1 under Portugal.

Reel 2, *Palma de Majorca:* the capital of the Balearic Islands—señoritas wearing the "Rebozillo"—motoring in Majorca—views of natives, convents, old olive groves—a she-goat suckling a baby.

Reel 3, *In New Madrid:* views of the modern city—the post office—the Square of Puerta del Sol, the center of the city—monuments and military display.

Reel 4, *Spanish Children:* Children of the cities of Seville and Granada

teresting native life—buildings and parks of the city and the surrounding mountains—a procession of honor—folk dances.

Reel 3, *In South Tirol*: Lake Garda and its lemon orchards—procession of Corpus Christi—a mountain railway and Stelvio, the highest crossroads of the Alps—the meeting point of Italy, Austria and Switzerland, 12,000 feet high—Ortler Peak.

Reel 4, *Climbing the Austrian Alps*: the dangers as well as the joys of mountain climbing; the city of Salzburg.

BELGIUM—9 reels—Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.

Reel 1, *Mirrors of Nature*: artistic and beautiful scenes reflected in the calm waters of famous rivers and canals in Belgium, France, and Germany.

Reel 2, *Belgium Smiles Again*: views of the ruined city of Dinant on the Meuse—unharmed Ostende and its beach, one of the world's great resorts.

Reel 3, *Bustling Brussels*: the Royal Palace—the Bourse and Boulevard life—the making of fine lace—views of the Palace of Justice—guild houses—the city hall.

Reel 4, *Martyred Cities*: showing the devastation of war in the French and Belgian cities of Ypres, Arras, Verdun, and Rheims.

Reel 5, *Artistic Antwerp*: the Cathedral and boulevards—Brabo Fountain and Rubens' Monument—art galleries and parks—harbor works along the Scheldt and the funeral cortège of a city councilor.

Reel 6, *Beautiful Bruges*: the beautiful canals and bridges of the Flemish Venice—the German submarine base—the belfry and city hall.

Reel 7, *In Flanders*: ineradicable marks left by the war—Flanders Fields—ruined Dixmude and scenes along the Yser—Ghent and the room where the treaty of the War of 1812 was signed—the Grand Beguinage of Ghent.

Reel 8, *Heroic Liège*: where the World War began—the River Meuse—the devastation caused by the great guns—the shattered Fort of Loncin—Malines and the Cathedral of Cardinal Mercier.

Reel 9, *In Rural Belgium*: Views of a country that is still like a child's picture book—dogcarts—windmills—wooden shoes—strange costumes—the village of Wortel—a picturesque festival for returning soldiers.

CHASE, THE—(SKI RUNNING IN THE ALPS)—Educational Film Exchanges, Inc. 729 7th Avenue, New York City.

Fifty of the world's champion ski-jumpers, performing their greatest

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feats of skill and daring, make this film a thrilling one. Photographed near St. Moritz in the Alps.

CHATEAUX OF FRANCE—*Society for Visual Educational, Inc., 327 S. LaSalle St., Chicago, Ill.*

Views of some of the beautiful and historic castles of France—a Moravian wedding and celebration are included.

CHEDDAR AND GLASTONBURY—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A pilgrimage to Glastonbury and its ancient abbey, the cradle of Christianity in England—the village of Cheddar, the home of Cheddar Cheese.

COACHING THROUGH CONWAY IN WALES—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A beautiful scenic of the Welsh country.

CZECHOSLOVAKIA—5 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *The Real Bohemia*: the Sokols or great gymnastic meets—the home of Kubelik—peasant life and native dances.

Reel 2, *In Picturesque Prague*: views in the old city with the narrow streets and the Rathouse and the 15th century clock—the great buildings of the new city—where the famous Bohemian glass is made—laborers and soldiery—scenes along the Vetava River and the mountains outside the city.

Reel 3, *From Carlsbad to Moravia*: the great health wells at Carlsbad and Marienbad—dog-drawn carts—the life, costumes and dances of the peasants.

Reel 4, *Present-Day Prague*: the Hradany—the Tyn Church—the National Theatre—the Charles Bridge—the Cathedral of St. Vitus and the River Vetava.

Reel 5, *Country Life in Bohemia*: scenic beauty and the rich, cultivated lands—cattle and crops—villagers at work and play—native dances.

ENGLAND—12 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *The Sunny South of England*: Land's End—Ilfracombe—Falmouth—Looe—Torquay—Weymouth—Bournemouth.

Reel 2, *Glimpses of English Town and Country*: Stonehenge—Wells Cathedral—Salisbury—Oxford—Cambridge—Stratford.

Reel 3, *With the American Y. M. C. A. in London*: American soldiers in England—Eagle Hut and the Washington Inn which was opened by the Duke of Connaught—Fourth of July in London.

Reel 4, *St. Dunstan's Happy Blind*: the university for the sightless in London—Otto Kahn's mansion turned into a training school for blinded soldiers—work of the blind.

Reel 5, *The War Women of England*: Trafalgar Square—Florence Nightingale—Army Service Corps—window washers—bus and aëro workers—3,000 war workers at Buckingham Palace.

Reel 6, *London Plays Ball*: British Royalty and nobility witness a game of baseball between the U. S. Army and Navy.

Reel 7, *Seeing Sights in London*: Westminster Abbey—Houses of Parliament—the Horse Guards—No. 10 Downing Street—the Catholic Cathedral—Whitehall—Admiralty Arch—Fire Monument—Guildhall—St. Mary-le-Bow—St. Paul's.

Reel 8, *Some British Bits Well Done*: a school for Army Cooks—an aviation camp—a tank garage—a war-dog college.

Reel 9, *With Uncle Sam's Submarine Chasers*: whence the Mayflower sailed—Francis Drake and the Bowling Green—submarine chasers dropping depth bombs—sea geysers—Admiral Sims.

Reel 10, *Around About London*: the Thames at Richmond—Windsor Castle—Hampton Court—Aboard a Houseboat—the Thames in London—Houses of Parliament—Lambeth—the Embankment—Street traffic, 1902 to 1918.

Reel 11, *From Blarney to Broadstairs*: the feat of kissing the famous stone—Queenstown—the Lusitania graves—a Ford for cranking aëroplanes—in Plymouth Harbor—Lord Northcliffe.

Reel 12, *A Fairy Foreland*: a picturization of Tennyson's poem "The Brook."

FRANCE—28 reels—*Burton Holmes Lectures, Inc., 7510 N. Ashland Ave., Chicago, Ill.*

Reel 1, *Gay Paree in Wartime*: the Paris Opera—the Champs Élysées—Arch of Triumph—Notre Dame—the Hotel des Invalides—Guynemer's plane—Napoleon's tomb—the Louvre.

Reel 2, *Glorious Versailles*: the palace and gardens of the home of the Bourbon Kings—the Grand Trianon—Le Petit Trianon—the 14th of July in Paris, 1918 (Bastille Day).

340 MOTION PICTURES FOR INSTRUCTION

Reel 3, *With the Yanks in France*: Crusaders in Orleans—Joan of Arc—aviators at Issoudun—American locomotives—the S. O. S. at Tours and the Cathedral—army bakery at Dijon.

Reel 4, *Across France with the Yankee "Gas Hounds"*: St. Nazaire—Saumur—the Castle of Angers—the ancient drawbridge—The Loire River—Amboise—Bloise—the Château—convoys to the front.

Reel 5, *Château-Thierry and Beyond*: with the Yanks near the front in July 1918—German loot—the berth of a Big Bertha—artillery in action—camouflage and filmed history.

Reel 6, *American Women in France*: American fund for French wounded—American Hospitals at Neuilly—tent hospital at Auteuil—nurses—Young Women's Christian Association—Aix-les-Bains—"Y" Girls.

Reel 7, *The Miracle of Montoir*: the building of the supply depot near St. Nazaire—a polyglot army of laborers—the service of supply.

Reel 8, *Salvation Army on the Job*: Commander Evangeline Booth—the passage and in the War Zone—the McAllister Sisters—opening a canteen—meetings near the front—on the edge of the Argonne.

Reel 9, *Paris, the Magnificent*: the Eiffel Tower—Arch of Triumph—Alexander Bridge—the art palaces and the Place de la Concorde Madeleine—the Opéra—Café de la Paix—the Boulevards and the Seine—Notre Dame—Cluny—Luxembourg—Pantheon—Sacré Cœur.

Reel 10, *The Doughnut That Did It*: the war service of the doughnut—the epidemic—a doughnut factory at the front.

Reel 11, *Uncle Sam, Salvager*: the great salvage plant of the A. E. F. at Tours—salving 100 million dollars worth of materials—mountains of clothing—the world's biggest tailor shop—millions of socks and shoes.

Reel 12, *In the Basque Country*: the French slopes of the Pyrenees—the land of Loyola and Francis Xavier—the game of pelota—the world's smallest republic, Andorra, and its president—mountain scenery and waterfalls.

Reel 13, *In Brittany*: the land of sincere piety—the Fair at La Faouet—the Pardon of Ste. Barbe—the Pardon of Our Lady of Baud—Pont Aven.

Reel 14, *Mirrors of Nature*: described as Reel 1 under Belgium.

Reel 15, *Parisian Faces and Figures*: striking studies of French physiognomies; superb panoramas from the Eiffel Tower.

Reel 16, *Martyred Cities*: described as Reel 4 under Belgium.

Reel 17, *Battlefields of France*: the ruined coal mines of the Lens Basin—Chinese Labor Corps at play—Fort of La Pompelle near Rheims—a tank in a trench; German prisoners at work.

Reel 18, *A Gold Star Pilgrimage*: to the battlefields of Château-

"HATS OFF"—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A story of the flag.

MAKING OF AN AMERICAN—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

The part that night schools play in the work of Americanization and the story of an immigrant's rise.

OLD GLORY—*World Educational Film Co., 732 S. Wabash Ave., Chicago, Ill.*

A color picture of the story of the flag, with interesting historical events connected with its evolution.

ORIGIN OF CAPITAL—1 reel—*American Motion Picture Corporation, 126 W. 46th St., New York City.*

An interesting reel which would serve as an introduction to a study of economics.

OUR NEW PRESIDENT—1 reel—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

ROMANCE OF THE REPUBLIC—11 reels—*General Vision Co., 104 W. 42nd St., New York City.*

Department of Treasury

Department of State

Department of War

Department of Navy

Department of Justice

Department of Labor

Department of Post Office

Department of Agriculture

Department of Interior and Commerce

Note: See description of this series on Page 63.

THE ROOSEVELT SERIES—\$8.00 for two reels—\$5.00 for one reel—*Y. M. C. A. Motion Picture Bureau, 120 W. 41st*

Street, New York, N. Y., and 1111 Center Street, Chicago, Ill.

- No. 1, T. R. Himself—1 reel.
- No. 2, Roosevelt, Friend of the Birds—1 reel.
- No. 3, Roosevelt, the Great Scout—2 reels.
- No. 4, The Roosevelt Dam—1 reel.
- No. 5, The Panama Canal—2 reels.
- No. 6, Roosevelt at Home—1 reel.
- No. 7, Roosevelt, Big Game Hunter—1 reel.
- No. 8, Roosevelt's Return Through Europe—1 reel.
- No. 9, T. R. Comes Back—1 reel.
- No. 10, The River of Doubt—2 reels.
- No. 11, Theodore Roosevelt, President—2 reels.
- No. 12, Roosevelt in the Great War—1 reel.

Pictures Suitable For Special Showing:

- No. 13, A Report of the Work of the Roosevelt Memorial Association (Memorializing Roosevelt)—2 reels.
- No. 14, Cuba Remembers T. R.—2 reels.

SCOUTING WITH DAN BEARD—2 reels—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

A dramatization of the famous Indian legend of "The Four Winds" and containing a great deal of useful scout information.

SPIRIT OF LAFAYETTE—6 reels—*Monogram Corporation, 512 Fifth Ave., New York City.*

Telling a double story of the heroism and aid of Lafayette in the Revolution, and a Captain Stanton in the World War.

Nature Study and Zoölogy

ANCESTRY AND CLASSIFICATION OF SOIL—1 reel—*American Motion Picture Corporation, 126 W. 46th St., New York City.*

CELE MITOSIS—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

The process of reproduction and growth of the human somatic cell is here shown by animated diagrams.

LIVING WORLD, THE—4 reels—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A microscopic biological motion picture showing the essential differences between living and non-living matter.

AFRICA—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

Studies of the wild life of Africa.

ANGLING FOR TROUT—1 reel—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

A picturization of the thrilling sport of trout fishing.

AS BRUIN, JR., SEES IT—1 reel—*American Motion Picture Corporation, 126 W. 46th St., New York City.*

A study of the beaver, his life, habits and building methods.

BEES—4 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

The Italian Honey Bee—life in the hive—the manufacture of honey—proper care and management of the bees and arrangement of hives.

BIRD LIFE—1 reel—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

BIRDS OF THE FARALLONES—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A study of the wild birds of the Pacific Coast, showing their community life, the care of the young, and with interesting views of birds in flight.

BIRDS OF A FAR-OFF SEA—460 ft.—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

Intimate studies of strange birds*that inhabit the bird island off the southern tip of Africa.

BLACK-AND-ORANGE GARDEN SPIDER—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

372 MOTION PICTURES FOR INSTRUCTION

An interesting reel showing the life of the familiar spider—spinning a web—capturing and devouring her prey—laying her eggs—the hatching of the young.

BLUE FLY, THE—1 reel—*Non-Theatrical Motion Picture Service, 159 E. Elizabeth Street, Detroit, Mich.*

An interesting picture of the entire life history of the fly. Excellent micro-photography.

BUMBLE BEE—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

The value of bee produce in the United States is approximately \$60,000,000 annually. This reel shows how the tiny insects amass this wealth.

CANADIAN LYNX, THE—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City and 418 S. Wabash Ave., Chicago, Ill.*

CHANNEL BASS FISHING OFF THE VIRGINIA COAST—1 reel—*Field and Stream, 45 W. 45th St., New York City.*

CHICKS—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

Photographed in the Kerr Chickeries in New Jersey, showing the modern methods of poultry raising on a large scale.

DANGEROUS TRAILS—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

DAY IN THE WILDS, A—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

EVOLUTION—5 reels—*Red Seal Pictures Corporation, 729 Seventh Ave., New York City.*

An excellent picture exposition of the Darwinian theory of the origin of species.

FIELD AND WAYSIDE—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

An interesting reel showing the struggle for existence between plants and insects—different varieties of insects.

FISH HAWK IN AMERICA, THE—1 reel—General Vision Co., 104 W. 42nd St., New York City.

FORTUNE BUILDERS—1 reel—Pictorial Clubs, Inc., 350 Madison Ave., New York City.

The life story of the silk moth.

FLEECE FOR GOLD—1 reel—Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.

A romance is interwoven with the story of the sheep industry on one of the largest ranches in the Northwest.

GETTING ACQUAINTED WITH BEES—1 reel—George Kleine Motion Picture Films, 49 W. 45th St., New York City.

A study in the life of the bee and food conservation.

GIANTS OF INDUSTRY—1 reel—Pictorial Clubs, Inc., 350 Madison Ave., New York City.

A study of bees and ants.

GOOSE SAFARI ON THE LOWER MISSISSIPPI, A—Field and Stream, 45 W. 45th St., New York City.

GREENBOTTLE FLY, THE—1 reel—Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.

The life history and work of the greenbottle fly, one of nature's scavengers.

HAWAIIAN FISHING—1 reel—Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.

An interesting reel on the fish of these islands with underwater views of various species, including the octopus—fishing boats and fish markets.

INDUSTRIOUS ANTS—1 reel—Pictorial Clubs, Inc., 350 Madison Ave., New York City.

Their work, habitations, and mode of living.

374 MOTION PICTURES FOR INSTRUCTION

JOHANNA—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

An interesting study of the imitative exploits and mentality of an untrained chimpanzee.

JOY RIDER OF THE OCEAN, A—320 ft.—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

A study of the remora, or shark-sucker, an unusual fish of the warm seas, which is provided with a suctional disc on the top of its head by which it attaches itself to the bodies of other larger fishes and is transported under borrowed power.

LACEWING FLY, THE—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A study of an interesting and useful fly which destroys the tiny insects which live on plants.

LIFE HISTORY OF FROGS AND TOADS—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

A detailed study from the spawn through the various stages of the tadpole and small toad to the full growth.

LIFE HISTORY OF THE MONARCH BUTTERFLY—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A detailed record of the evolution of the butterfly from the larva, showing the spinning of the chrysalis, the caterpillar shedding its skin, the development of the butterfly within the chrysalis, and finally the emerging of the butterfly.

MALARIA AND THE MOSQUITO—2 reels—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A microscopic motion picture which shows the development of the malaria parasite in the human body and in the body of the mosquito. An unusually interesting presentation of an educational subject.

MAIN STREET IN NATURE'S WONDERLAND—1 reel—*Bray Productions, Inc., 130 W. 46th St., New York City.*

Life, breeding, and methods of obtaining food of prairie dogs, bees, and ant lions.

MICROSCOPIC POND LIFE—350 ft.—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

A microscopic study of the infinitesimal life in a small pond.

MOSQUITO, THE—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

The plan of this reel is the same as that of the *Life History of the Monarch Butterfly*; it deals with the development of the mosquito through the periods of hatching from the egg, the larva and its method of feeding and moulting, the pupa and how it splits to let the mosquito emerge.

NATURE'S PERFECT THREAD SPINNER—450 ft.—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

The cultivation and care of the silkworm.

OCEAN RECLUSE, AN—175 ft.—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

An interesting reel on the hermit crab and its strange habit of using untenanted shells of other crustaceans.

OUR COMMON ENEMY—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., Chicago, Ill.*

A microscopic study of the house fly and its menace to health.

OUR FOUR-FOOTED PALS—1 reel—*American Motion Picture Corp., 126 W. 46th St., New York City.*

An entertaining and interesting reel on cubs at play.

PETER THE RAVEN—1 reel—*Bray Productions, Inc., 130 W. 46th St., New York City.*

The history of the hatching and early life of a raven, its capture by some hunters and its life in captivity—the tricks it learns.

POND AND STREAM LIFE—2 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

Microscopic studies of the development of a dragon-fly—embryo snails in their eggs—turtles, frogs and toads and their methods of capturing and devouring food—a "horse-hair" snake—a fight between a baby crawfish and a waterbug—the "water tiger."

376 MOTION PICTURES FOR INSTRUCTION

PRACTICAL WORKINGS OF THE SHELL GAME—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

The development of the chicken in the egg and its hatching.

RAISING OSTRICHES IN SOUTH AFRICA—350 ft.—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

The habits of ostriches and the methods of raising them.

ROYAL CHINOOK, THE—2 reels—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

An extensive and detailed story of the raising of salmon from the eggs to the time they return to the streams to spawn and die.

SAMIA SECROPIA, THE GIANT AMERICAN SILKWORM—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

The plan of this film is the same as that followed in the treatment of *Life History of the Monarch Butterfly* and *The Mosquito*; the life cycle of the moth is shown from the egg to the moth.

SECRETS OF LIFE SERIES—12 reels—*Educational Film Corporation, 729 7th Ave., New York City.*

Reel 1, The Ant

Reel 2, The Bee

Reel 3, The Spider

Reel 4, The Butterfly

Reel 5, The Ant Lion

Reel 6, The Fly

Reel 7, The Ladybug

Reel 8, In a Drop of Water

Reel 9, The Mosquito

Reel 10, Little People of the World

Reel 11, Little People of the Sea

Reel 12, Our Six-Legged Friends

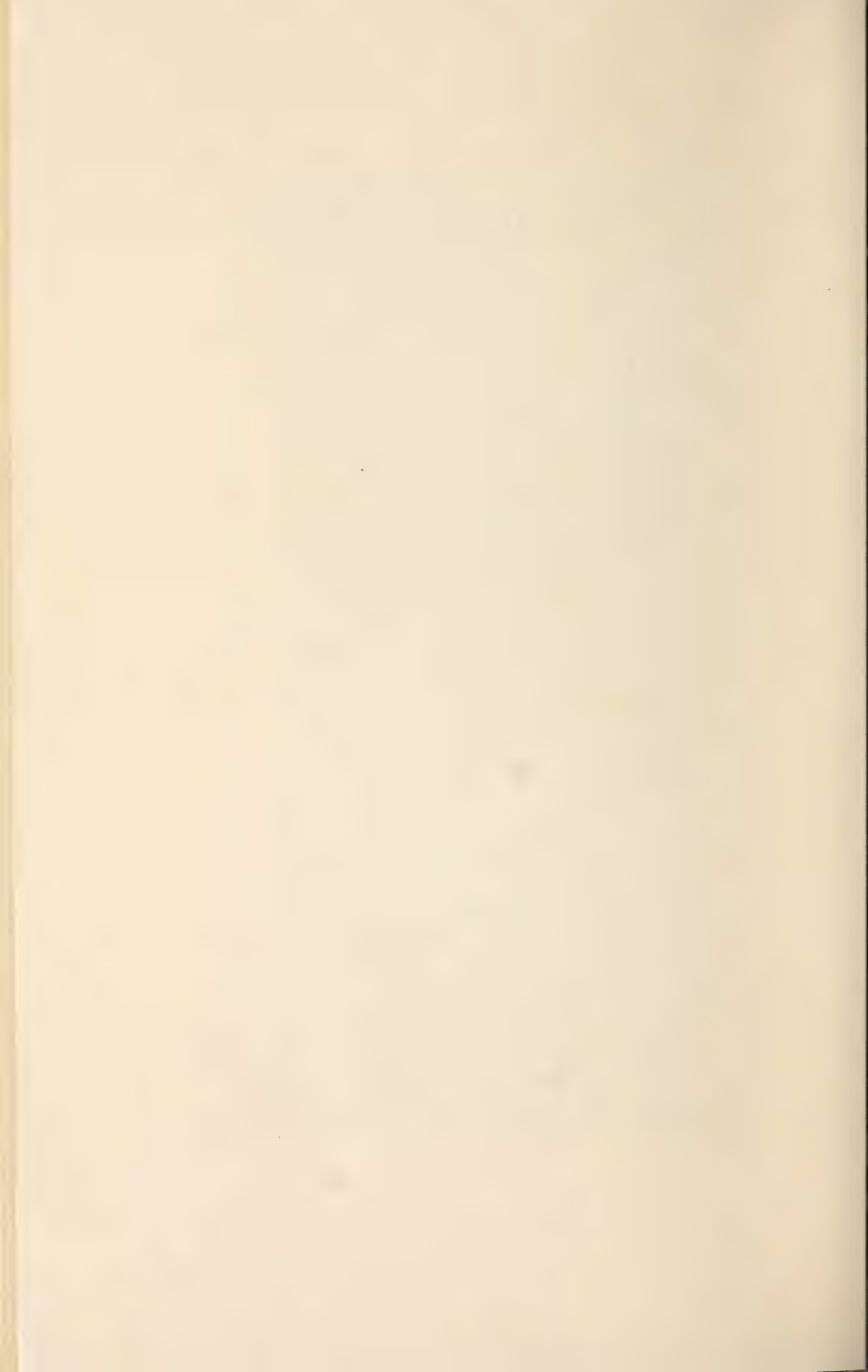
Note: See description of this series on p. 64.

SILKWORM, THE—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*



Courtesy of Educational Screen

SCENE FROM "THE COVERED WAGON," FAMOUS PLAYERS-LASKY CORP.—p. 380



History, life and habits of the various moths, together with interesting views of them.

SPIDERS AND THEIR VICTIMS—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

A study of the spider and his methods of obtaining food.

SPONGE FISHING AND INDUSTRY—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A study of aquatic plants and animals.

STRANGE CATERPILLARS—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Their means of sustenance; collecting and preserving butterflies.

TOADS—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

Complete life cycle of the garden and tree toads.

TRAPPING THE WEASEL—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

TURTLES AND BIRDS—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

Interesting views of green turtles, humming birds, and the American eagle at home.

VISIT TO A BIRDSHOP—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Birds and animals found in a birdshop.

THE VOICE OF THE NIGHTINGALE—*Educational Film Exchanges, 370 7th Ave., New York City.*

This unusual one reel subject won the Riesenfeld Gold Medal for 1925. It is a charming blend of nature and æsthetics. Not a text film, but highly educational nevertheless, and will be of special interest to all bird lovers, both juvenile and adult.

378 MOTION PICTURES FOR INSTRUCTION

WASPS—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

The life history of the mud-dauber and Polistes wasps—the hatching of the eggs—the building of their houses and storing food.

WHERE PLANTS LIVE—1 reel—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

The prime requisites of plant life are soil, moisture, air and light. This reel shows the variations of these elements which are required for different groups of plants.

WHY ELEPHANTS LEAVE HOME—2 reels—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

This film shows the labor of the elephant in Ceylon where he is a beast of burden, means of transportation, a derrick, and day laborer. The titles tend to make this more of an entertainment film than an educational.

WILD ANIMAL LIFE IN THE UNITED STATES—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

Educational nature studies—an unusual revue of the passing wild life of America.

WILD LIFE IN NORTH AMERICA—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

WILD ANIMALS AND THEIR YOUNG—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

WILD FLOWERS—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

WITH BOB WHITE IN THE SEDGE OF PINE WOODS OF MISSISSIPPI—*Field and Stream, 45 W. 45th St., New York City.*

WOODCRAFT FOR BOYS—370 ft.—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

The outdoor training given boys at one of America's military schools.

Language and Literature

Purporting to represent the works of standard authors, most of these films are of theatrical origin, too long for classroom presentations, and of varying degrees of faithfulness to the original. They are included here, without recommendation or comment, because some teachers of literature want to know where to obtain them. See discussion of relation of motion pictures to literature in Chapter III under Literature.

While this book is concerned primarily with the educational film for classroom use (text film), and not for school entertainment, it is realized that there are community situations where the school film entertainment has a place. Some notable films are included, not made directly from standard literature.

ADAMS CHILDREN, THE—*James W. Foley—Gibson Studio, Casselton, N. Dak.*

AMERICA—*14 reels—Robt. W. Chambers—D. W. Griffith, 1476 Broadway, New York City.*

AND WOMEN MUST WEEP (*The Three Fishers*)—*2 reels—Charles Kingsley—Educational Film Exchange, 370 Seventh Ave., New York City.*

AUNT TABITHA—*Oliver W. Holmes—Gibson Studio, Casselton, N. Dak.*

BARBARA FRIETCHIE—*Clyde Fitch—Producers Distributing Corporation, 469 Fifth Ave., New York City.*

BABBITT—*8 reels—Sinclair Lewis—Warner Bros., 1600 Broadway, New York City.*

BEAU BRUMMEL—*10 reels—Clyde Fitch—Warner Bros., 1600 Broadway, New York City.*

380 MOTION PICTURES FOR INSTRUCTION

- BEN HUR—General Lew Wallace—Metro-Goldwyn-Mayer
Distributing Corporation, 729 7th Ave., New York City.
- BILL (Crainquebille)—4 reels—Anatole France—Red Seal
Pictures Corporation, 1600 Broadway, New York City.
- BLACK BEAUTY—7 reels—Anne Sewell—Vitagraph, Inc.,
1400 Locust Ave., Brooklyn, N. Y.
- BOY OF FLANDERS (*A Dog of Flanders*)—7 reels—Ouida—
Metro-Goldwyn-Mayer Distributing Corp., 540 Broadway,
New York City.
- BROOK, THE—Tennyson—George Kleine Motion Picture
Films, 49 W. 45th St., New York City.
- CALL OF THE WILD, THE—6 reels—Jack London—Pathé Ex-
change, Inc., 104 W. 42nd S., New York City, and 418 S.
Wabash Ave., Chicago, Ill.
- CAPTAIN JANUARY—6 reels—Laura E. Richards—Principal
Pictures, 1540 Broadway, New York City.
- THE CHRISTIAN—9 reels—Hall Caine—Metro-Goldwyn-Mayer
Distributing Corporation, 729 7th Ave., New York City.
- CONNECTICUT YANKEE IN KING ARTHUR'S COURT—Mark
Twain—Fox Corporation, 10th Ave., and 55th St., New
York City.
- COVERED WAGON—10 reels—Emerson Hough—Famous
Players-Lasky Corp., 485 5th Ave., New York City.
- COURTSHIP OF MYLES STANDISH—5 reels—Pathé Exchange,
Inc., 35 W. 45th St., N. Y. C., and 418 S. Wabash Ave.,
Chicago.
- CRICKET ON THE HEARTH—6 reels—Charles Dickens—Pathé
Exchange, Inc., 35 W. 45th St., N. Y. C., and 418 S. Wab-

ash Ave., Chicago, Ill. Also 7 reels—Selznick (Universal Pictures Corp. Successors), 730 5th Ave., New York City.

DAVID COPPERFIELD—7 reels—Charles Dickens—Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill., and Associated Exhibitors, Inc., 35 W. 45th St., New York City.

DAVID COPPERFIELD—5 reels—Charles Dickens—General Vision Co., 104 W. 42nd St., New York City.

DAVID GARRICK—General Vision Co., 104 W. 42nd St., New York City.

DICKERY, DICKERY, DOCK— $\frac{1}{2}$ reel—General Vision Co., 104 W. 42nd St., New York City.

DOMBEY AND SON—6 reels—Charles Dickens—General Vision Co., 104 W. 42nd St., New York City.

DOROTHY VERNON OF HADDON HALL—10 reels—Charles Major—United Artists Corporation, 729 7th Ave., New York City.

EBB TIDE—7 reels—Robert Louis Stevenson—Famous Players-Lasky Corp., 2017 3rd Ave., New York City.

THE ETERNAL CITY—8 reels—Hall Caine—First National Pictures, Inc., 383 Madison Ave., New York City.

FAGIN (*Oliver Twist*)—Charles Dickens—General Vision Co., 104 W. 42nd St., New York City.

FAIRY WOOD—General Vision Co., 104 W. 42nd St., New York City.

FATAL MARRIAGE, THE—*Enoch Arden*—5 reels—Alfred Tennyson—Film Booking Offices of America, 723 7th Ave., New York City.

382 MOTION PICTURES FOR INSTRUCTION

GIRL OF OZ, THE—5 reels—General Vision Co., 104 W. 42nd St., New York City.

GREAT EXPECTATIONS—6 reels—Charles Dickens—Nuart Pictures, 116 W. 39th St., New York City.

HAMLET—7 reels—William Shakespeare—General Vision Co., 104 W. 42nd St., New York City.

HANSEL AND GRETEL—2 reels—Fairytale Story—Universal Pictures Corp., 1935 5th Ave., New York City.

HEADLESS HORSEMAN (*Legend of Sleepy Hollow*)—7 reels—Washington Irving—Film Distributing Corporation, New York City.

HEY DIDDLE DIDDLE— $\frac{1}{2}$ reel—General Vision Co., 104 W. 42nd St., New York City.

HOLMES, OLIVER WENDELL—Pictorial Clubs, Inc., 350 Madison Ave., New York City.

HOOSIER ROMANCE, A—5 reels—James Whitcomb Riley—General Vision Co., 104 W. 42nd St., New York City.

HOOSIER SCHOOLMASTER—6 reels—Edward Eggleston—American Motion Pictures Corporation, 126 W. 46th St., New York City, and Producers Distributing Corp., 469 5th Ave., New York City.

HOME SWEET HOME—General Vision Co., 104 W. 42nd St., New York City.

HUCKLEBERRY FINN—Mark Twain—Paramount Pictures, 485 Fifth Ave., New York City.

HUNCHBACK OF NOTRE DAME—12 reels—Victor Hugo—Universal Pictures Corporation, 1600 Broadway, New York City.

HUMPTY DUMPTY— $\frac{1}{2}$ reel—*General Vision Co., 104 W. 42nd St., New York City.*

IN THE PALACE OF THE KING—8 reels—*F. Marion Crawford—Metro-Goldwyn-Mayer Distributing Corporation, 729 7th Ave., New York City.*

IRON HORSE, THE—11 reels—*Fox Film Corporation, 10th Ave. and 55th St., New York City.*

IRVING, WASHINGTON—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

IVANHOE—5 reels—*General Vision Co., 104 W. 42nd St., New York City.*

JACK AND THE BEANSTALK—2 reels—*General Vision Co., 104 W. 42nd St., New York City, and Universal Pictures Corp., 1600 Broadway, New York City.*

JANICE MEREDITH—12 reels—*Paul Leicester Ford—Metro-Goldwyn-Mayer Distributing Corp., 2018 3rd Ave., New York City.*

KIPLING'S MANDALAY—4 reels—*American Motion Picture Corp., 126 W. 46 St., New York City.*

KISS FOR CINDERELLA, A—*Sir James M. Barrie—Paramount Pictures, 485 Fifth Ave., New York City.*

LES MISERABLES—12 reels—*Victor Hugo—General Vision Co., 104 W. 42nd St., New York City, and Fox Film Corporation, 10th Ave. and 55th St., New York City.*

LIGHT THAT FAILED, THE—7 reels—*Rudyard Kipling—Famous Players-Lasky Corporation, 2017 3rd Ave., New York City.*

LITTLE MINISTER, THE—6 reels—*Sir James M. Barrie—Vita-graph Inc., 1400 Locust Ave., Brooklyn, New York.*

384 MOTION PICTURES FOR INSTRUCTION

- LITTLE LORD FAUNTLEROY—10 reels—*Frances Hodgson Burnett—United Artist's Corporation, 729 7th Ave., New York City.*
- LITTLE RED RIDING HOOD—2 reels—*Fairy Story—Universal Pictures Corporation, 1600 Broadway, New York City.*
- LITTLE RED RIDING HOOD—George Kleine Motion Picture Films, 49 W. 45th St., New York City.
- LITTLE RED RIDING HOOD—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*
- LONGFELLOW, HENRY W.—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*
- MACBETH—*William Shakespeare—General Vision Co., 104 W. 42nd St., New York City.*
- MAIN STREET—7 reels—*Sinclair Lewis—Warner Bros., 1600 Broadway, New York City.*
- MAN WITHOUT A COUNTRY—6 reels—*Edward Everett Hale—Universal Pictures Corporation, 1600 Broadway, New York City. Also an eleven reel version by Fox Film Corp.*
- MAUDE MULLER—2 reels—*John Greenleaf Whittier—Pathé Exchange, Inc., 35 W. 45th St., New York City.*
- MARK TWAIN—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*
- MEMORIES—*Carter Cinema Producing Corporation, % Evans Laboratories, 1476 Broadway, New York City.*
- MERCHANT OF VENICE—*William Shakespeare—General Vision Co., 104 W. 42nd St., New York City.*
- MILADY—(*Twenty Years After*)—8 reels—*Alexander Dumas*

—*Selznick (Universal Pictures Corporation, Successors),
730 5th Ave., New York City.*

MOANA OF SOUTH SEAS—6 reels—*Famous Players-Lasky Corporation, 485 Fifth Ave., New York City.*

MONSIEUR BEAUCAIRE—*Booth Tarkington—Famous Players-Lasky Corporation, 485 Fifth Ave., New York City.*

MONTE CHRISTO—*Alexandre Dumas—Fox Film Corporation, 10 Ave., & 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

NANCY (*Oliver Twist*)—*General Vision Co., 104 W. 42nd St., New York City.*

NE'ER DO WELL—8 reels—*Rex Beach—Famous Players-Lasky Corporation, 2017 3rd Ave., New York City.*

NEW WIZARD OF OZ—5 reels—*General Vision Co., 104 W. 42nd St., New York City.*

ODYSSEY—3 and 5 reels—*Homer—General Vision Co., 104 W. 42nd St., New York City.*

OLD CURIOSITY SHOP—6 reels—*Charles Dickens—American Motion Picture Corporation, 126 W. 46th St., New York City.*

OLD OAKEN BUCKET—*General Vision Co., 104 W. 42nd St., New York City.*

OLD SCROOGE—4 reels—*From Charles Dickens—Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

OLIVER TWIST—8 reels—*Charles Dickens—First National, 729 7th Ave., New York City.*

OUR MUTUAL FRIEND—8 reels—*Charles Dickens—Film Booking Offices of America, 723 7th Ave., New York City.*

386 MOTION PICTURES FOR INSTRUCTION

QUINCY ADAMS SAWYER—8 reels—*Charles Felton Pidgin—
Metro-Goldwyn-Mayer, 729 7th Ave., New York City.*

QUO VADIS—6 reels—*Henryk Sienkiewicz—George Kleine, 49
W. 45th St., New York City.*

PENROD—8 reels—*Booth Tarkington—First National Pictures
729 7th Ave., New York City.*

PENROD AND SAM—7 reels—*Booth Tarkington—First National
Pictures, 729 7th Ave., New York City.*

PETER PAN—*Sir James M. Barrie—Paramount Pictures, 485
Fifth Ave., New York City.*

PONY EXPRESS, THE—*Paramount Pictures, 485 Fifth Ave.,
New York City.*

POWER OF A LIE—5 reels—*Johann Bojer—Universal Pictures
Corporation, 1600 Broadway, New York City.*

PRINCE AND THE PAUPER—6 reels—*Mark Twain—Selznick
(Universal Pictures Corporation, Successors), 730 5th
Ave., New York City.*

PIED PIPER OF HAMLIN—*George Kleine Motion Picture Films,
49 W. 45th St., New York City.*

RICHARD THE LION HEARTED—8 reels—*Sir Walter Scott—
United Artists Corporation, 729 7th Ave., New York City.*

RIDE OF PAUL REVERE—*Henry Wadsworth Longfellow—
George Kleine Motion Picture Films—49 W. 45th St.,
New York City.*

RIP VAN WINKLE—7 reels—*Washington Irving—Producers
Distributing Corporation 469 Fifth Ave., New York City.*

ROBIN HOOD—11 reels—*United Artists Corporation, 729
Seventh Ave., New York City.*

ROMEO AND JULIET—*Fox Film Corporation, 10th Ave., and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

SCROOGE—*From Christmas Carol by Charles Dickens—General Vision Co., 104 W. 42nd St., New York City.*

SENTIMENTAL TOMMY—*Sir James M. Barrie—Paramount Pictures, 485 Fifth Ave., New York City.*

SHERLOCK HOLMES—9 reels—*A Conan Doyle—Metro-Goldwyn-Mayer, 729 7th Ave., New York City.*

SILAS MARNER—7 reels—*George Eliot—Associated Exhibitors, 35 W. 45th St., New York City.*

SNOW WHITE—*General Vision Co., 104 W. 42nd St., New York City.*

SPOILERS, THE—8 reels—*Rex Beach—Metro-Goldwyn-Mayer, 729 7th Ave., New York City.*

STORY OF PLYMOUTH ROCK, THE—*Gearge Kleine Motion Picture Films, 49 W. 45th St., New York City.*

STRANGER, THE (*The First and Last*)—7 reels—*John Galsworthy—Famous Players-Laskey Corporation, 2017 3rd Ave., New York City.*

TALE OF TWO CITIES—*Charles Dickens—General Vision Co., 104 W. 42nd St., New York City.*

TESS OF THE D'URBERVILLES—8 reels—*Thomas Hardy—Meiro-Goldwyn-Mayer, 729 7th Ave., New York City.*

THIEF OF BAGDAD—14 reels—*Arabian Nights—United Artists Corporation, 729 7th Ave., New York City.*

THREE MUSKEETERS—10 reels—*Alexandre Dumas—United Artists Corporation, 729 7th Ave., New York City.*

388 MOTION PICTURES FOR INSTRUCTION

TIMOTHY'S QUEST—6 reels—Kate Douglas Wiggin—Selznick
(Universal Pictures Corporation, Successors), 730 5th
Ave., New York City.

TREASURE ISLAND—6 reels—Robert Louis Stevenson—Fox
Film Corporation, 10th Ave. & 55th St., New York City,
and 910 S. Wabash Ave., Chicago, Ill.

UNDER TWO FLAGS—8 reels—Ouida—Universal Pictures Cor-
poration, 1600 Broadway, New York City.

VANITY FAIR—8 reels—William Makepeace Thackeray—Gen-
eral Vision Co., 104 W. 42nd St., New York City, and
Metro-Goldwyn-Mayer, 729 7th Ave., New York City.

VICAR OF WAKEFIELD—7 reels—Oliver Goldsmith—Pathé Ex-
change, Inc., 35 W. 45th St., New York City, and 418 S.
Wabash Ave., Chicago, Ill.

VILLAGE BLACKSMITH—Henry Wadsworth Longfellow—Gen-
eral Vision Co., 104 W. 42nd St., New York City.

VIRGINIAN, THE—8 reels—Owen Wister—B. P. Schulberg
Productions, 1650 Broadway, New York City.

VOLGA BOATMAN, THE—Feature length—Berkovici Producers
Distributing Corporation, 469 Fifth Ave., New York
City.

WHEN KNIGHTHOOD WAS IN FLOWER—12 reels—Charles Ma-
jor—Famous Players-Laskey Corporation, 2017 3rd Ave.,
New York City.

WHITTIER, JOHN GREENLEAF—Pictorial Clubs, Inc., 350 Madi-
son Ave., New York City.

WITHOUT BENEFIT OF CLERGY—6 reels—Rudyard Kipling—
Pathé Exchange, Inc., 35 W. 45th St., New York City, and
418 S. Wabash Ave., Chicago, Ill.

YOUR FLAG AND MY FLAG—*Wilbur D. Nesbit—George Kleine Motion Picture Films, 49 W. 45th St., New York City. New York City.*

Vocational

DOMESTIC SCIENCE

COCOANUTS—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

COFFEE—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

COPRA—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

DAIRY—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

LESSON IN COOKING, A—*Gibson Studios, Casselton, N. Dak.*

How to make an Omelet taught so perfectly in the film that classes have made excellent omelets without a word from the teacher.

OYSTER INDUSTRY, THE—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A reel on the Chesapeake Bay oyster industry.

PINEAPPLES—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

SALT—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

SUGAR—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

390 MOTION PICTURES FOR INSTRUCTION

RICE—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

WHEAT—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

WHEAT INDUSTRY—*Gibson Studios, Casselton, N. Dak.*

The complete process as carried out in the famous Red River Valley—highly educational.

AGRICULTURE

AGRICULTURE—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

AMERICA'S GRANARY—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Showing the evolution of farming machinery and the planting, cultivating and harvesting of corn, rice and wheat.

CENTRAL PLAINS—2 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A study of the industries of the central plains which are dependent primarily upon natural resources—farming methods—stock raising—dairying—poultry farming—coal and copper mines—ore boats—lumbering in Wisconsin, Michigan and Minnesota—limestone quarries in Indiana—power house at Niagara.

DAIRY CATTLE—TYPES, BREEDS AND CHARACTERISTICS—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A short history of the five chief dairy breeds, Holstein, Jersey, Guernsey, Ayrshire, and Brown Swiss, with an explanation of their characteristics.

DAIRY CATTLE AND THEIR SELECTION—*Society for Visual Education Inc., 327 S. LaSalle St., Chicago, Ill.*

A comprehensive reel on the subject, in which is explained the essential differences between different types of dairy cows, why some produce more and with greater economy, physical characteristics and the

importance in milk production of constitution, feeding capacity, formation of milking organs, etc.

DAIRY MANAGEMENT—2 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

Proper methods of dairy management—feeding and milking cows—weighing milk—the milk station—water supply—machinery.

DAIRY TALES—1 reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Interesting details in the processes of butter and cheese manufacture.

HOMESTEAD, THE—3 reels—*American Farm Bureau Federation, 58 E. Washington St., Chicago, Ill.*

HORSE SENSE—2 reels—*American Farm Bureau Federation, 58 E. Washington St., Chicago, Ill.*

SPRING VALLEY—5 reels—*American Farm Bureau Federation, 58 E. Washington St., Chicago, Ill.*

MANUFACTURING

Building Materials

LUMBERING—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

PRICE OF PROGRESS—2 reels—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Cloths and Coverings

BATIK—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

CLOTH—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

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HATS—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

HEMP—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

LACE—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

SILK—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

Electricity

CAPTURED ELECTRICITY—*Bray Productions, Inc., 130 W. 46th St., New York City.*

The search for the power substitute for coal, including attempts to harness the waves of the ocean and to extract the free electricity from the air.

ELECTRICITY—4 reels—*Carter Cinema Producing Corporation, % Evans Laboratories, 1476 Broadway, New York City.*

Its generation and control and manifold application to our daily needs in power plants, telegraphy, etc.

Mining

GOLD MINING—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

One of the General Vision Company's series on industries, edited for schools.

OIL—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

One of the General Vision Company's series of industries edited for schools.

ROMANCE OF OIL—*Bray Productions, Inc., 130 W. 46th St., New York City.*

Sixty years ago whale oil was the only illuminant and the reel opens with scenes from the great whaling industry, followed by views of oil gushers and modern oil industry of Texas.

TURNING OUT SILVER BULLETS—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

Taken at the Philadelphia Mint by permission of the U. S. Treasury Department. Transformation of the ore into liquid silver. Casting of the ingots. Pressure in the rolling mills, where it under goes the 28 different operations needed for the production of silver coins.

Metals

BEATEN GOLD—*Fox Film Corp., 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

An unusually interesting film on an industry of which little is known. The film shows how the gold is rolled between steel rollers and then beaten by hand to a thickness of one-two-hundred-thousandth of an inch.

ENGINE LATHE AND ITS OPERATION, THE—7 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A highly technical study of this important tool for students of mechanical and shop operations.

TIN—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

UNIVERSAL MILLING MACHINE AND ITS OPERATION—8 reels—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

A similar study of another important machine.

Pottery

POTTERY—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

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WOODLAND POTTER, THE—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

A potter in the backwoods of Maine models beautiful objects of art out of clay.

Physiology and Health

GETTING ACQUAINTED WITH BACTERIA—*Society for Visual Education, Inc., 327 S. LaSalle Street, Chicago, Ill.*

The microscope reveals to the motion picture camera harmless and harmful bacteria. The several types are clearly demonstrated; supplied with diagrams that appeal to the child mind.

MAKING MILK SAFE—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

The important subject of milk testing clearly illustrated.

PASTEUR—2 reels—*American Motion Pictures Corp., 126 W. 46th St., New York City.*

ROMANCE OF A WHITE BOTTLE—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

A film on the value of milk which has been made famous through its distribution by one of the great milk distributing corporations of America.

ANATOMY AND PHYSIOLOGY—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

A two reel subject from the biology series of the General Vision Company produced for classroom work.

AQUATIC LIFE—*General Vision Co., 104 W. 42nd St., New York City.*

Another reel from the biology series of the General Vision Company.

* For more technical films on this subject see The Human Body Series, Bray Productions, Inc., 120 W. 42nd St., New York City; the list of American Medical Films, Inc., 350 Madison Ave., New York City; Samuel A. Block, 152 W. 42nd St., New York City; Ford Motion Picture Laboratories, Detroit, Mich.; and The American Social Science Association, 370 Seventh Ave., New York City.

BLOOD CIRCULATION—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

Both one and two reel versions of the subject from the biology series of text films.

CIRCULATION OF THE BLOOD—2 reels—*Carter Cinema Producing Corporation, c/o Evans Laboratories, 1476 Broadway, New York City.*

See Blood Circulation.

BLOOD VESSELS, THE—*General Vision Co., 104 W. 42nd St., New York City.*

DIGESTIVE SYSTEM—*General Vision Co., 104 W. 42nd St., New York City.*

HEART AND HOW IT WORKS, THE—*General Vision Co., 104 W. 42nd St., New York City.*

HOW THE FIRES OF THE BODY ARE FED—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

The mechanical processes from the chewing of the food through the stomach and intestines into the blood circulatory system. Striking comparisons between other engines and the human body. X-ray photographs of the stomach in action.

MICROSCOPE AND BEYOND, THE—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

One of the best of the biology text films of the General Vision Company, giving magnified views of protozoa, algæ, and marine plankton.

REPRODUCTIVE SYSTEM—*General Vision Co., 104 W. 42nd St., New York City.*

RESPIRATORY AND URINARY SYSTEMS—*General Vision Co., 104 W. 42nd St., New York City.*

SAFEGUARDING THE NATION—5 reels—*Carter Cinema Producing Corporation, c/o Evans Laboratories, 1476 Broadway, New York City.*

396 MOTION PICTURES FOR INSTRUCTION

Physiological and Psychological effects of small amounts of alcohol upon the structure and functions of the human body. Liberal use is made of microscopic photographs and animated diagrams.

T-C, YOUR SIXTH SENSE—1 reel—*Picture Service Corporation, 71 W. 23rd St., New York City.*

An interesting film on temperature, atmospheric and body, showing the uses of the thermometer. The invention of the thermometer by Galileo in 1621, and the modern methods of manufacture are shown.

Welfare

COMRADES OF SUCCESS—2 reels—*Carter Cinema Producing Corporation, c/o Evans Laboratories, 1476 Broadway, New York City.*

Three little gnomes impersonate safety, courtesy and loyalty in individual lives.

COST OF CARELESSNESS—1 reel—*Carter Cinema Producing Corporation, c/o Evans Laboratories, 1476 Broadway, New York City.*

HIGH COST OF HURRY—2 reels—*Carter Cinema Producing Corporation, c/o Evans Laboratories, 1476 Broadway, New York City.*

The most frequent accidents in the home, on the street and on the cars and how they may be avoided.

OUR CHILDREN—1 reel—*Carter Cinema Producing Corporation, % Evans Laboratories, 1476 Broadway, New York City.*

Athletics and Sports

ATHLETIC MOVEMENTS ANALYZED—2 reels—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 415 S. Wabash Ave., Chicago, Ill.*

Various athletic movements are slowed down to eight times less than normal speed, an unusual study in the muscular action involved in

physical training. Especially valuable to show "form" as exhibited by champion athletes. Syllabus by physical training staff, Board of Education, New York City.

BACK TO NATURE—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Life in a girls' camp. Diving, swimming, aquaplaning, canoeing and other outdoor sports in both slow and normal motion.

ANIMAL ATHLETES—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The play of wild and domesticated animals. A liberal number of slow motion views.

BASEBALL SLOW MOTION PICTURES—1 reel—*American Motion Picture Corp., 126 W. 46th St., New York City.*

Babe Ruth making a home run and other baseball champions in action.

BOXING—2 reels—*General Vision Co., 104 W. 42nd St., New York City.*

An instructional film from the U. S. Naval Academy Series.

BUILDING WINNERS—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Training for track and football with slow motion photography. How Jack Dempsey keeps fit.

BRAIN AND BRAWN—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Interesting contrast between the old-time school with all study and no play and the modern school exemplified by the Culver Military Academy with its wealth of physical training features, such as drills, horse-back riding, tennis and other sports.

BY HOOK OR CROOK—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

An amusing reel of which the producer says "Fred Stone and Rex Beach go fishing together. The well known comedian does not fish scientifically while the eminent author does, but results show that sometimes luck is better than science."

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CALL OF THE GAME, THE—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The outdoor sports of hunting deer and mountain climbing compared with the more popular sports of football and baseball.

CHAMPIONS—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Championship form in golf, tennis, sprinting, baseball, diving, swimming and crew work. Includes some excellent slow motion photography.

DAY WITH THE CIRCUS, A—2 reels—*Carter Cinema Producing Corporation, c/o Evans Laboratories, 1476 Broadway, New York City.*

All the delights of the circus—bare-back riding, chariot racing, trained horses, ponies, dogs and monkeys.

DESHA'S TRYST WITH THE MOON— $\frac{1}{2}$ reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

An artistic reel of a dancer in a moonlit vale. Slow motion pictures show the details of the graceful movements.

DANGER LURE, THE—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The thrills and risks of motor-boat racing, wrestling, pole vaulting, jumping, hurdling and sprinting.

FIELDS OF GLORY—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The wholesome rivalry of sports such as polo, tennis and boxing between the various countries.

FISHING FEVER—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

All forms of an ancient sport from trout fishing in a mountain stream to trolling for bluefish from the deck of an ocean-going ship.

FOUR R'S—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

In the picture of the exceptional training given at Culver Military

Academy, the three R's, "readin," "ritin," and "rithmetic" have been supplanted by a fourth, riding. Inspiring views of Culver's cavalry troop.

FUTURE GREATS—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Slow motion pictures of the younger generation getting their start at baseball, tennis, golf and polo.

GOLFING WITH JESS SWEETSER— $\frac{1}{2}$ reel—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Yale's winner of the American and British Amateur Gold Championships. Slow motion views permit close study of the various shots.

GIRLS AND RECORDS—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The producer says, "This picture contrasts the simple sport of cutting roses indulged in by the girl of fifty years ago and the kind of sports girls go in for today." Mrs. Clayton's form in golf, Helen Wills' skill in tennis and Eileen Riggins' perfect diving are shown in normal and slow motion.

GOLF IN SLOW MOTION—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Two great women champions, Cecil Leitch and Alexa Sterling, at both normal and slow motion.

GRACE IN SLOW MOTION—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Classic dancing in slow motion. The petal dance, the garland dance, and American Indian dances, all done with a setting of beautiful spring landscapes.

HOBBIES—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Playing poker and playing fish are contrasted in this reel.

HOOFBEATS—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

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"The daily routine life of race horses. What they eat and drink, and how they exercise." Some good slow motion photography, exciting races and jumps.

HAPPY YEARS, THE—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The old swimming hole and the juvenile baseball fields that we all love.

INVADERS—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

International sporting events including tennis, cricket, polo, racing, golf and yachting.

NATIONAL RASH, THE—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The evolution of the game of golf.

NATURE'S ROUGE—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Girls at the summer camp of the Sargent School. Swimming, basket ball and canoeing.

ON GUARD—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Evolution of the art of self-defense. Reel includes dueling, fencing and boxing.

OLYMPIC MERMAIDS—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Four women champions swimmers—Gertrude Ederle, Eileen Riggan, Helen Meany and Doris O'Meara.

OUR DEFENDERS—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Training and sports at Annapolis and West Point, with emphasis on the points developed especially at each academy.

PHEASANT HUNTING AT THE FAMOUS BLOOMING GROVE CLUB—
*1 reel—Carter Cinema Producing Corporation, c/o Evans
Film Laboratories, 4176 Broadway, New York City.*

Spirited illustrations of an interesting sport.

**RESCUED—Pictorial Clubs, Inc., 350 Madison Ave., New York
City.**

Showing the coast guard and the rescue of a girl.

**ROUGH AND TUMBLE—1 reel—Pathé Exchange, Inc., 35 W.
45th St., New York City, and 418 S. Wabash Ave., Chi-
cago, Ill.**

Bronco busting, push ball, football, wrestling and field hockey.

**STAR PITCHER, A—Pictorial Clubs, Inc., 350 Madison Ave.,
New York City.**

The secret of Alexander's pitching shown by means of the slow motion camera. Action of a pitching machine.

**SWIMMING—1 reel—General Vision Co., 104 W. 42nd St., New
York City.**

One of the U. S. Naval Academy Series made for instructional purposes.

**SWIMMING AND DIVING—2 reels—Society for Visual Education,
Inc., 327 S. LaSalle Street, Chicago, Ill.**

Produced by Dr. White at the University of Chicago. Presents such stars as Johnny Weissmueller in both slow motion and normal photography, the emphasis being on correct form in each event.

**SUN AND SNOW—1 reel—Pathé Exchange, Inc., 35 W. 45th
St., New York City, and 418 S. Wabash Ave., Chicago, Ill.**

Contrasting scenes of winter and summer sports at Lake Placid and down in Florida.

**SOLITUDE AND FAME—1 reel—Pathé Exchange, Inc., 35 W.
45th St., New York City, and 418 S. Wabash Ave., Chi-
cago, Ill.**

The sports of the city contrasted with the pleasures of the country. Some interesting slow motion photography.

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STUNTS—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The hard work necessary to attain skill in athletics. Stunts of Bird Millman, the tight-rope walker, and Johnny Weissmueller, trick swimmer.

SPIKES AND BLOOMERS—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Sports of the modern girl contrasted with those of the girls of former days—running, jumping, diving, throwing the discus and javelin, baseball, and basket ball. Some excellent slow motion photography.

SPORTING SPEED—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Exciting races among men and dogs—ice skating, ice boating, motor boating. All require a high degree of speed.

SPORTING ARMOR—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The armor of the middle ages contrasted with the sturdy bodies acquired in the games of football, ice hockey, etc., of modern times.

TENNIS IN SLOW MOTION—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

A match game between Johnston of California and Patterson, the Australian Champion.

TAKING A CHANCE—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The hazards of cross country riding, jumping, football, baseball. Hazardous riding by the mounted police.

SPORTING RHYTHM—1 reel—*Pathé Exchange, Inc., 35 W. 45th St. New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Dancing, ball playing and boxing demonstrating rhythm of movement in athletics.

WHAT FORM MEANS TO AN ATHLETE—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

By a series of animated illustrations with the camera designed to retard the action, the important movements of the athlete's body are shown from start to finish in the different events of a track meet.

SILVERY ART—1 reel—*Red Seal Pictures Corporation, 729 Seventh Ave., New York City.*

An interesting reel depicting the art of skiing, also beautiful scenes among the highest peaks of the Swiss Alps.

FLIRTING WITH DEATH—2 reels—*Red Seal Pictures Corporation, 729 Seventh Ave., New York City.*

Dangers and thrills of skiing among the highest peaks of the Alps.

WRESTLING—1 reel—*General Vision Co., 104 W. 42nd St., New York City.*

Another of the instructive U. S. Naval Academy Series.

WILD AND WESTERN—1 reel—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

A rodeo in Calgary, Canada—expert riding, steer roping and other sports of the frontier. A thrilling picture of a great western round-up.

Chemistry

CHEMISTRY OF COMBUSTION—*Pictorial Clubs, Inc., 350 Madison Ave., New York City.*

Experiments to show chemical combinations which produce combustion.

CRYSTALS IN FORMATION—*George Kleine Motion Picture Films—49 W. 45th St., New York City.*

Unusual pictures of crystal formations in the chemical world.

EXPERIMENTS WITH SULPHUR—*Pictorial Clubs, Inc., 729 7th Ave., New York City.*

Chemical processes and commercial applications.

Physics

EINSTEIN THEORY OF RELATIVITY—4 reels—*Red Seal Pictures Corporation, 729 Seventh Ave., New York City.*

A highly commended film on a subject which has engaged the public as well as scientific interest of the world for several years.

Electricity and Magnetism

ELECTRO-MAGNETIC INDUCTION—ELECTRO-MAGNETISM (2 reels)
—ELECTROSTATICS—HIGH FREQUENCY CURRENTS—MAGNETISM—Six Reels by Professor H. B. Lemon—*Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.*

Miscellaneous

CAMPBOR—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

CORRECT POSITION AND MOVEMENT FOR WRITING—*United Cinema Co., 120 W. 41st St., New York City.*

A demonstration of the arm-movement principles of penmanship.

CUBE AND SQUARE ROOT—1 reel—*Carter Cinema Producing Corporation, c/o Evans Film Laboratories, 1476 Broadway, New York City.*

An attempt to objectify the study of cube and square root by means of photography and animated diagrams. A type of film concerning which the author has elsewhere expressed doubt as to the appropriateness of the motion picture as a medium of instruction (see p. 82).

It is listed here in order that teachers may form their own opinion of the value of the motion picture in the teaching of mathematics.

DEATH RAY, THE—2 reels—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

The producer says, "H. Grindell Mathews, English scientist and inventor of a 'death ray,' shows some of the machinery he uses in casting

the mysterious beam, which is said to be capable of destroying life and matter at great distances. The two reels were made with the assistance of the French Government."

FAMOUS MELODY SERIES—*Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

Single reel subjects presenting musical picturizations of songs of different countries. The first release is "Songs of Ireland," which will be followed by twelve other subjects, all of which can be obtained through the Pathé Exchange.

IS CONAN DOYLE RIGHT?—*2 reels—Pathé Exchange, Inc., 35 W. 45th St., New York City, and 418 S. Wabash Ave., Chicago, Ill.*

An exposé of the tricks used by fake spiritualists in their alleged communications with the dead. Shows the value of research by serious students and scientists.

MY LADY'S PERFUME—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

Entertaining and instructive, showing the perfume industry in the town of Grasse on the Riviera, where the world's finest perfume is made.

RAMBLES OF A RAINDROP—*Fox Film Corporation, 10th Ave. and 55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.*

The experiences of a raindrop in geyser, cloud, waterfall, lakes, rivers and ocean.

REMBRANDT—*7 reels—Pictorial Clubs, Inc., 729 7th Ave., New York City.*

Birthplace and love story of the great painter. Years of success and then poverty and misery of old age. Striking reproductions of some of Rembrandt's famous paintings including "The Night Watch," "The Man with the Golden Helmet" and the artist's son, "Titus."

An original music score furnished with this film.

SALT OF THE EARTH—*Fox Film Corporation, 10th Ave. and*

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55th St., New York City, and 910 S. Wabash Ave., Chicago, Ill.

A story introduces and forms the vehicle for the exposition of the mining and refining of salt.

STORY OF THE LUCIFER MATCH, THE—*Pictorial Clubs, Inc., 729 7th Ave., New York City.*

A complete story of the manufacture of a match.

WINTER'S GIFT TO SUMMER—*Pictorial Clubs, Inc., 729 7th Ave., New York City.*

The process of modern ice harvesting.

YOUNG SALTS— $\frac{1}{2}$ reel—*George Kleine Motion Picture Films, 49 W. 45th St., New York City.*

Work and play at the Culver Military Academy.

PURCHASE FILMS

It is against the policy of the principal motion picture producing corporations to sell prints, as their business is built on rentals to theaters. Such films as are available for sale to schools are made by welfare and industrial organizations, or by the non-theatrical agencies or individuals that have had the capital and experience to attempt production. As these are comparatively few, it will be more convenient to list these under the firm names, rather than by subjects.

Films listed in the three Libraries of Part I (Chapters II and III) are not relisted in Part II.

List of Principal Firms Having Educational Films For Sale

Bray Productions, Inc., 120 W. 42nd St., New York City.

Visual Text Sales Co., 1268 So. Grenshaw Blvd., Los Angeles, Calif.

Carlyle Ellis, 220 W. 42nd S., New York City.

Raymond L. Ditmars, New York Zoölogical Society, Borough of Bronx, New York City.

The DeVry Corporation, Portable Motion Picture Projector Manufacturers, 1111 Center St., Chicago, Ill.

The Ford Motion Picture Laboratories of the Ford Motor Company, Detroit, Mich.

Apollo Film Company, (Beseler Films), 286 Market St., Newark, New Jersey.

Urban-Kineto Corporation,* Irvington-on-the-Hudson, New York.

* Name changed, as we go to press, to Spiro Film Corporation, Irvington-on-the-Hudson, New York.

Reels issued by the United States Government Departments below are listed under the proper subject-matter classification in the list of Free Films (Comprehensive List of Educational Films). These are also sold to schools at cost.

Office of Motion Pictures, United States Department of Agriculture, Washington, D. C.

Department of the Interior, Bureau of Mines, Pittsburgh, Pa.

United States Department of Labor, Children's Bureau, Washington, D. C.

United States Department of Public Health Service, Washington, D. C.

Pathé Exchange, Inc. (Long Term Lease)—35 W. 45th St., New York City.

The Pathé Films are listed under Rental Films in Chapter VI, except those already listed in the Film Libraries in Chapter III.

Most of the industrial firms (like the International Harvester Company and General Electric Company) which have films listed under Free Films in the Comprehensive List, will sell prints at cost to educational institutions.

Schools starting to form permanent film libraries would do well to write any of the firms or exchanges mentioned in this book, as many of them will make up prints to order, even though they do not advertise prints for sale.

BRAY PRODUCTIONS INC.

120 W. 42nd St., New York City.

DAYPHO-BRAY LIBRARY OF FILMS

(Mostly on General Science Subjects)

The reels are of the short lengths so desirable for class use. They vary from 150 feet to a full 1000 foot reel. The catalog is too extensive for our reprinting and contains nearly a thou-

sand titles on school topics, classified by the Dewey decimal system, used by most libraries for book classification.

The group in General Science has been especially edited for school use and is summarized as follows:

1. Air and Water—Eleven Subjects, 6 Reels
2. Energy—Twelve Subjects, 7 Reels
3. The Earth—Fourteen Subjects, 5 Reels
4. Life—Thirty-two Subjects, 16 Reels
5. The Universe—Eight Subjects, 6 Reels

In addition to the General Science films, the following series on The Science of Life was made under direction of the Surgeon General in the U. S. Public Health Service. The series established a new high standard in instructional films:

Part I—General Biology

- Reel 1. Protoplasm. The Beginning of Life
- Reel 2. Reproduction in Lower Forms of Life
- Reel 3. Reproduction in Higher Forms
- Reel 4. Interdependence of Living Things

Part II—Communicable Diseases

- Reel 5. How Plants and Animals Cause Disease
- Reel 6. How Disease is Spread
- Reel 7. How to Prevent Disease
- Reel 8. How the Mosquito Spreads Disease
- Reel 9. The Fly as a Disease Carrier

Part III—Personal Hygiene

- Reel 10. Personal Hygiene for Young Women
- Reel 11. Personal Hygiene for Young Men
- Reel 12. General Personal Hygiene

Of the same high quality is a Bray series on "Elements of the Automobile" produced for the U. S. Army:

- Reel 1—The Running Gear and Differential
- Reel 2—The Running Gear and Differential (Concluded)

Reel 3—The Engine

Reel 4—The Engine (Concluded)

Reel 5—The Carburetor

THE HUMAN BODY

Statement (Condensed) from the Producers

“The Human Body” prepared by Jacob Sarnoff, M.D., associate in the Department of Anatomy in the Long Island Medical College. Made originally in connection with Dr. Sarnoff’s work at the Long Island Medical College, the pictures were prepared for specific educational purposes. As their success in classroom work was demonstrated, they were reëdited and enlarged for general educational use.

“For the first time the attempt is made to utilize human dissection for general anatomical and physiological instruction. This would be obviously impossible in any other way than through the motion pictures. Dissection is supplemented by animated drawings to reveal hidden processes and functions and by mammalian organs functioning in actual life. By the Pneumo-Viscera method, originated by the author to demonstrate the organs of the body by inflating them with air, much that is obscure even in ordinary laboratory dissection is made plain.”

A brief synopsis from the producers of this five reel series follows:

Reel 1—*The Digestive Tract*. Animated drawings portray the entire digestive tract, and the relation of the different organs to each other. Actual dissection of the human abdomen shows the anatomical arrangements of these organs. Then animation demonstrates the passage of food from the mouth through the gullet, stomach and small and large intestines.

Reel 2—*A Respiratory System*. Animated drawings first show the location and inter-relation of the respiratory organs. Then dissection and demonstration by the Pneumo-Viscera method of the lungs as they

appear in the body. Animated drawings reveal the passage of the air through the lungs and its distribution by the blood to all parts of the body.

B. Urinary System. The entire urinary system is dissected and assembled outside the body so that its important functions can be studied in themselves as well as the relation of the urinary tract to the circulatory and other systems.

Reel 3—*The Heart and How It Works.* Presents actual dissection of the human heart, demonstrating in detail the construction of its chambers, partitions, valves and cords. The mechanism and action of the valves of the heart are presented by actual specimens and animated drawings. The action of the real living heart is seen at normal rate and in a slow motion picture.

Reel 4—*The Blood Vessels and Their Functions.* The vascular system is illustrated by actual dissections of the main blood vessels and by animated drawings. The course of the blood flow is illustrated by animation. The cycle of a drop of blood is seen from its starting point, the heart, until its return. Actual flow of blood is seen through a microscope.

Reel 5—*Human Development.* The reel is a careful yet frankly treated analysis of the human reproduction. The biology and physiology of reproduction is touched upon through the use of animated drawings sufficiently to make clear the fertilization of the ovum. Then are shown in succession an unusual series of pictures revealing the development of the ovum through its various stages of embryo, fetus and infancy. Charts carry this development forward from infancy to maturity. The treatment of this whole subject is simple, direct and purely scientific.

Reel 6—*The Fuel System and Ignition.*

Reel 7—*Ignition (Continued).*

Reel 8—*Ignition (Concluded).*

Reel 9—*The Cooling System and the Clutch.*

Reel 10—*The Transmission.*

Reel 11—*The Transmission (Concluded).*

Reel 12—*The Brakes.*

Mr. J. R. Bray is justified in calling these "pedagogical motion pictures." They utilize animated technical drawings, "phantom drawings" for seeing the invisible; and using the well known principle of "divide and conquer," he has made

each step so short and so richly illustrated that what seemed difficult as a whole, seems easy when separated into parts. Repetition is used for recall at critical points in taking a new step. The two series here mentioned are the best illustrations at hand of the author's contention in Chapter X, that ample capital as well as technical direction is needed for the production of films designed for class instruction—two qualifications seldom found together in non-theatrical production.

These groups may be rented from The University of Wisconsin. Prints from the whole library may be purchased from The Bray Productions, Inc., 120 W. 42nd St., New York City, at 11 cents a foot.

VISUAL TEXT SALES CO

1268 South Crenshaw Blvd., Los Angeles, Calif.

(Mostly on Athletic Subjects—\$60 per reel)

VOLUME I

MARCHING

This film shows gymnastic marching, covering some eighteen movements analyzed with the slow speed camera. Military marching, squad and company movements and comparisons with gymnastic marching. Novelty marching; figure marching, etc.

VOLUME II

FORMAL GYMNASTIC DRILLS

Methods of giving commands and the execution thereof. Sample developmental drills with and without hand apparatus. Various methods of forming the class on the floor. Emphasis on correct form in fundamental and derived positions.

VOLUME III

CORRECTIVE GYMNASTICS

Illustrates correct and incorrect postures. Posture tests.

Shows common postural defects, such as spinal curvature, sloping neck, round shoulders, hollow back, and the corrective procedure for each type.

Illustrates common arch defects, the treatment of broken arches, with illustrations of interesting corrective games.

Defects of heart and lungs, with exercises for various types.

Nutrition cases, showing means of recognizing cases and illustrating the treatment.

VOLUME IV

COMBATIVE ACTIVITIES

The fundamental principles of hand to hand fighting. Boxing and wrestling, illustrating the various holds and positions for offensive and defensive work. Rules and procedure in conducting amateur bouts.

VOLUME V—PART I

TUMBLING—ELEMENTARY INDIVIDUAL

This shows preliminary exercises leading up to and including simple tumbling stunts, somersaults, etc., that any child can do without equipment, and their value in physical development.

VOLUME V—PART II

TUMBLING—ADVANCED INDIVIDUAL

This reel covers advanced forms of tumbling. The work is analyzed by the slow speed camera and suspended animations. Shows clearly the muscles brought into play in such stunts as handsprings, round-offs, forward and back somersaults, etc.

416 MOTION PICTURES FOR INSTRUCTION

clearly illustrated and analyzed with the slow speed camera. All the standard swimming strokes covered in detail.

VOLUME XI—PART II

LIFE SAVING AND DIVING

Elementary and advanced standard and fancy diving analyzed with slow speed camera and suspended animation. Depicts very clearly the approach to a drowning person, breaking holds, methods of towing and artificial respiration.

FUNDAMENTALS OF FOOTBALL—(2 reels)

By Knute Rockne, famous coach of Notre Dame University.

CARLYLE ELLIS

220 W. 42nd St., New York City.

(Mostly on Health and Welfare Subjects)

The prints below may be purchased from the address above, at \$100 per reel. They may also be rented or borrowed from the organizations for whom they were made. Many state boards of health and state universities have some of these films.

1. A NURSE AMONG THE TEPEES—1 reel.

Records a winter visit to the Arapahoes of Wyoming at forty below zero. A public health nurse has been working among this unreconstructed tribe and the results, like the elements in this picture, are extraordinary.

2. PUEBLOS AND PICKANINNIES—1 reel.

Through the steaming lowlands of Louisiana, where the population is almost wholly African, to the Pueblos of New Mexico. Native life is shown just as it is.

3. THE GOLDEN YEAR—1 reel.

A retrospect of the war activities of the Y. W. C. A., ending with the launching of the "Blue Triangle" at Hog Island shipyard.

4. THE HIGHROAD—3 reels.

A human narrative made to illustrate the most modern ideal of individual and social health, especially in its application to women. In this new conception, health includes not only bodily vigor and poise but a wholesome and vital expression in work, recreation, companionship and the whole emotional and spiritual life.

(Made for the Bureau of Social Hygiene, Y. W. C. A.)

5. MEETING THE MENACE OF TUBERCULOSIS—2 reels.

Telling in narrative review what happens to a family attacked by tuberculosis. Public provisions for reaching, diagnosing and treating the cases take one through clinic, preventorium, hospital, sanatorium and occupational reconstruction. Full clinical data are presented in a popular way.

(Made for the College of Physicians and Surgeons of Columbia University and the New York Tuberculosis Association. Supervised by Dr. Iago Galdston.)

6. THE KID COMES THROUGH—1 reel.

A fast-moving little drama of child life in a big city, made with child players, to be shown to children. The story dramatizes, without preaching, the value of physical fitness derived from fresh air, wholesome food, cleanliness and right health habits.

(Made for the New York Tuberculosis Association.)

7. TAKE NO CHANCES—1 reel.

Distributed by the National Tuberculosis Association.

Made to enlist active public interest in the fight against tuberculosis, and especially to overcome the prejudice, born of ignorance and fear, against the public clinic and sanatorium. A brief human narrative introduces the twin institutions, which are seen for what they really are.

(Made for the New Jersey Tuberculosis League.)

8. OUR CHILDREN—2 reels.

After three years of active service this picture is still the standard work on child welfare. It is the authentic story of what happened in one typical American community when a Children's Bureau health conference woke it up.

(Made for the Children's Bureau, U. S. Dept. of Labor.)

9. FOOT FOLLY—1 reel.

An unpreachy preachment on right shoes and the care of the feet,

418 MOTION PICTURES FOR INSTRUCTION

especially for girls and young women. Combining lively personal narrative, amusing photographic oddities and practical help, it has been a marked factor in creating the low-heeled shoes styles.

(Made for Bureau of Social Education, Y. W. C. A.)

10. NEW JERSEY HEALTH CRUSADERS—1 reel.

Shows by example how a community may make a winning fight against tuberculosis by starting with the children and teaching the basis of prevention. An entertaining review of work among New Jersey children that is readily adaptable, by a few title changes, to extensive use elsewhere.

(Made for the New Jersey Tuberculosis League.)

11. FROM WHISTLE TO WHISTLE—2 reels.

A pictorial history of the conditions that led to protective legislation for women in American industry, contrasting good and bad conditions in various periods to the present.

(Made for the National Board of the Y. W. C. A.)

12. WHEN WOMEN WORK—2 reels.

A dramatization of the Federal standards for working women as to hours, wages and working conditions in factories, showing the evil effects of unfair conditions and the restorative effect on individuals and community of a rise to the accepted standards. The story is woven around the lives of two girls in strongly contrasted but authentic circumstances.

(Made for the Women's Bureau, U. S. Department of Labor.)

13. AN EQUAL CHANCE—2 reels.

A narrative of the battle with the influenza epidemic in one rural community that leads into exposition of the value of the public health nurse everywhere and reviews her varied activities under many strange circumstances.

(Made for the National Organization for Public Health Nursing.)

14. IN MIDDIES AND BLOOMERS—1 reel.

A sunny narrative of a city girl worker who went to a Y. W. C. A. vacation camp near New York, of what she found there and what it did for her. Emphasis: the spirit of comradeship—body building—love of outdoor beauty—activity.

(Made for the Y. W. C. A.)



THE 17-YEAR LOCUST. SCENE FROM DIT-
MAR'S LIVING NATURAL HISTORY—p. 419



BEAVERS. SCENE FROM DITMAR'S LIVING NATURAL HISTORY—
p. 419



15. WELL BORN—2 reels.

(Made for Children's Bureau.)

16. BIG GAINS FOR LITTLE BODIES—1 reel.

LIVING NATURAL HISTORY

By Raymond L. Ditmars
care of
the New York Zoölogical Society
Borough of Bronx
New York City
(*Biology and Nature Study*)

This series is so complete and scientifically listed, that it is put down here, in abbreviated form, with Mr. Ditmar's own classifications. Mr. Ditmar's catalog gives contents of each film and other information of great value to teachers.

Reel 39 Planaria (Shell-less Molluscs) is included in the One Hundred Twenty Reel Library in Chapter II of this book. They are sold at about \$100 per reel.

MAMMALS

Primates.

- Reel 1. Anthropoid Apes.
Reel 2. New World Monkeys.
Reel 3. Old World Monkeys.

Carnivores.

- Reel 4. Cat Animals.
Reel 5. Bears.
Reel 6. Canines and Smaller Carnivores.

Carnivores (continued). Seals.

- Reel 7. Smaller Carnivores; Seals,

420 MOTION PICTURES FOR INSTRUCTION

- Reel 8. Smaller Rodents.
- Reel 9. Larger Rodents.
- Reel 10. The Prairie "Dog" and Beaver.

Ungulates.

- Reel 11. Deer.
- Reel 12. Bovines, Sheep, Goats, and Antelopes.
- Reel 13. Miscellaneous Ungulates.

Ungulates (continued). Proboscideans.

- Reel 14. Odd-toed Ungulates and Elephants.
- Reel 15. Bats, Insectivores, Edentates.

Marsupials.

- Reel 16. Kangaroos and Opossums.

Marsupials (continued). Monotremes.

- Reel 17. Miscellaneous Marsupials.

BIRDS

Various Orders in Each Reel.

- Reel 18. Perching Birds and Birds of Prey.
- Reel 19. Aquatic Birds.
- Reel 20. Miscellaneous Birds.
- Reel 21. Various Orders and Wingless Birds.

REPTILES

Serpents.

- Reel 22. The Viperine Serpents.
- Reel 23. Larger Serpents.
- Reel 24. New and Old World Harmless Serpents.
- Reel 25. Colubrine Poisonous Serpents.

Lizards.

- Reel 26. New World Lizards.
- Reel 27. Old World Lizards.

Chelonians, Crocodilians.

Reel 28. Turtles and Tortoises.

AMPHIBIANS

Tailless Amphibians.

Reel 29. Frogs and Toads.

Tailed Amphibians.

Reel 30. Salamanders, Newts and Allies.

INSECTS

Neuroptera, Odonata and Homoptera.

Reel 31. Life Histories.

Hemiptera, Orthoptera.

Reel 32. Insects that Sing; forms of Mimicry.

Reel 33. Beetles; Butterflies and Moths.

Lepidoptera (continued).

Reel 34. Transformations of Butterflies and Moths.

Reel 35. Larger Moths.

Hymenoptera; Diptera.

Reel 36. Bees, Wasps, Ants and allies.

Additional Arthropods.

Reel 37. Millipedes, Centipedes, Scorpions and Tropical Spiders.

Reel 38. North American Spiders.

MARINE LIFE

(Prepared and arranged under the direction of the scientific staff of the Marine Biological Station at Naples).

422 MOTION PICTURES FOR INSTRUCTION

Reel 39. Planaria. Shell-less Mollusks.

Reel 40. Fishes.

Reel 41. Starfishes, Jellyfishes, Anemones.

Reel 42. Crustaceans, including various species of crabs and lobsters.

DEVRY EDUCATIONALS

DeVry Corporation, 1111 Center St., Chicago, Ill.

(Mostly on Geography)

The following DeVry Educational reels are available for purchase. They vary from 600 to 800 feet in length, and are sold at \$65 per reel on non-inflammable stock.

Teachers' leaflets are available for all DeVry Educationals.

1. AMERICAN INDIANS AND THEIR ANCESTORS.

Home life of the Winnebagos of the present day—doing the family laundry—making moccasins—sewing—hairdressing—an odd mixture of the modern and the primitive. Hopis of the Pueblo group doing the Buffalo Dance—ancient cave dwellers—the ruins of Mitla—the buried City of Mexico built before the time of the cave dwellers.

2. THE LIFE OF THE LUMBERJACK.

Lumberjacks in crews in camp in the California forests—Chinese cook—rolling logs into the water—sawing and squaring up logs—planing lumber—logging train crossing mountains and valleys—piling lumber on freight cars—hauling lumber by ox team—dam and power house at Lake Tahoe.

3. SPONGING FOR A LIVING.

Unusual scenes of a little-known industry.

4. ANIMAL ROUND-UP ON WESTERN CATTLE RANCHES.

Cattle on the ranges in the Southwest—roping steers in the corral—branding—arrival at the stockyards—a Frontier Day meet—Miss Louise Thompson, champion cow girl, on a kangaroo—a bad horse—broncho busting.

5. THE OIL INDUSTRY.

Boring a well—putting in the casing—bringing in a gusher—capping



ART TITLE FROM THE DE VRY FILM, "AMERICAN INDIANS AND THEIR ANCESTORS"—p. 422



the gusher—piping oil to tanks—escaping gas—an oil well on fire—derricks and pumps—a boom oil town.

6. RAISING CASH BY RAISING POULTRY.

Embryology of a chick—hatching eggs by hen and by incubator—baby chicks—pictures of various breeds.

7. CHARMING GIRLS AND BUSY MEN OF JAPAN.

The Japanese school girl writes with a brush—ceremonies concerned with flowers constitute a regular course of study—training geisha girls—chrysanthemum exhibit—the lantern maker—the parasol maker—the shoemaker—the wood carver—a fisherman—the three wise monkeys of the Iyeesu temple at Nikko.

8. FUJIYAMA AND OTHER SCENIC BITS OF JAPAN.

Views of Mount Fujiyama, the sacred mountain of Japan—beautiful reflections in Lake Shoji and Motoso—Mount Asamayama, active volcano—Miyajima through the Torii—shooting the Fujikawa rapids—Kirifuri falls and gardens—rustic bridge in the country—Kameido, famous Wisteria Bridge—home life and cities of Japan.

9. JAPAN AT WORK AND PLAY.

Dance of the geisha girls—jiu-jitsu—army setting-up exercises—the race track at Yokohama—raising rice in Japan—an ancient mill—a glimpse of the Ainus, the aborigines of Japan.

10. SCENES IN PANAMA.

Map of the Panama Canal Zone—waterfront and street scenes—a Panama lottery drawing—cock fighting—natives pounding corn—washing clothes and children—native huts in the jungle—cocoanut palms and banana trees—traveling in a cayuca, native dug-out canoe—Panama school girls at play.

11. THE PANAMA CANAL.

General view showing the Pedro Miguel locks—cranes and shovels at work—the Culebra Cut—Pacific entrance to the Canal—Canal Zone fire department—Ancon Hospital and high school—sinking a caisson—negro laborers at work and play—convicts making roads—Hotel Washington—the Gatun Locks—electric mules—dredges at work—the great Spillway at Gatun Dam—Admiral Dewey on a trip through the Canal Zone—scenes in Colon—ex-President Taft's trip through the Canal.

12. SCENES IN PERU, BOLIVIA, AND COSTA RICA.

Governor's Palace at Lima—President's inaugural parade—Tihuanaco Inca ruins—Lake Titcaca, the home of the ancient Peruvian civilization—Llamas—Peruvian Indians. Street scenes in La Paz, Bolivia—Indian beasts of burden—views of San José, Costa Rica—the volcano, Asserri—bull carts—Costa Rican homes and women—troops—steam fire engines.

13. LIFE IN SIAM AND TAHITI.

Scenes in Bangkok—wharves and market boats on the Menam River—quarrying coral rock to build a roadway in Tahiti—the upa-upa dance—Papeete natives in Sunday dress coming out of church—pony races and native boys racing—panorama of Papeete and ships at anchor.

14. THE GIRL ON HORSEBACK TOURS CALIFORNIA.

Seeing California on horseback—leaving the pony for a try at mountain sports in wintertime, such as skiing, tobogganing, and dog sledding—Monterey—the legend of the Monk of Mt. Rubidoux—at El Portal, the entrance to Yosemite—the Twin Brothers, Half Dome, and Mirror Lake.

15. PICTURESQUE CALIFORNIA.

The Golden Gate and a children's party in San Francisco—historic Monterey—Truckee Valley and Camp Fire Valley—Oakland—a Christmas celebration at Los Angeles—Murphy Dam near San Diego—San Elijo, reservoir site—San Dequito Dam—Lake Hodges Dam—Burbank's spineless cactus and a California orange grove.

16. GLIMPSES OF FOREIGN CITIES OF THE WORLD.

Views of Cairo, Egypt—Canton, Pekin, and Shanghai in China—Tokio and Yokohama, Japan—Monte Carlo—Rome; Naples—Messina—Sicilian Cities—Papeete—Seoul, Corea—Jaipur, India.

17. HISTORIC SPOTS IN WASHINGTON, D. C., AND NEW YORK CITY.

The Capitol Building—Congressional Library—colonial house where the Treaty of Ghent was signed—St. John's Church—house where Lincoln died—City Hall Park in New York—the end of Brooklyn Bridge—Sub-Treasury on Wall Street and Trinity Church—panorama of Ellis Island—Brooklyn Bridge and subway.

18. CHINA AND COREA.

Temple sheep and Pagoda Temple—Manchu woman with elaborate

headdress—camels loaded for the trip across the Gobi desert—Shan Hai Quan, the end of the Great Wall of China—Chinese sampan—sailing up the Pearl River—Hongkong—Gates of Seoul—street scene from the window of a sedan chair—Street of the Pottery Merchants—Corean farmer plowing—harvesting rice by hand—rice merchant—Corean women dancing in the open air—a Corean festival.

19. EGYPT.

The Street of the Weavers in Cairo—bazaar life—funeral procession through one of the bazaars—boats on the Nile—Upper Nile River and scenes of loading grain boats—Assuan Dam and Gates—Temple of Abydos and hieroglyphics on the walls—Bishareen dance—natives of the desert, a lion and lioness—sunset on the Libyan Desert.

20. PRIMITIVE INDUSTRIES.

A Corean farmer plowing—Corean washwomen—Chinese blacksmiths—making soy in China—shepherds of Bethlehem—an Egyptian carpenter—plowing with a wooden plow and water buffalo in India—primitive Hindu grain mills—driving piles by hand in Japan—Japanese woman pearl divers—carrying wood and straw—wood carvers and shoemakers at work—gathering seaweed—old-fashioned spinning wheel—Phillipine women weaving cloth, embroidering and making lace—weaving baskets—Phillipine natives carrying and sawing a log for building.

21. GROWING WHEAT AND CORN.

Wheat: plowing with two horses and with several teams—plowing with a tractor—harrowing with a tractor—seeder drill—binding and threshing wheat—grain in an elevator. Corn: corn fields in different parts of the United States—cultivating corn—plucking ears of corn—the corn harvester.

22. LIFE OF THE BEE.

Comb showing cells—bee eggs—queen bee, workers and drone—bee farm or apiary—opening a hive, showing how the bees live—smoking the hive—bees working on the comb—artificial combs—removing a bee swarm from a tree branch—bee sting magnified—putting the swarm into the hive—building the comb—feeding the grubs—the maids of honor for the queen.

23. FRUIT ORCHARDS—EAST AND WEST.

Young orange groves in Florida—close-ups of orange blossoms and fruit—pineapples, bananas, melons, and cocoanuts grown in Florida—

peach orchards in Georgia—picking and packing peaches, a display of fruit—Southern watermelon fields—Michigan cherry orchards, berry farm and vineyard—an apple orchard in Michigan—an Idaho irrigated orchard—growing and picking pears—an irrigated orchard in Montana—cultivation of grapes in California—an orange grove and banana trees—California muskmellons.

24. THE LIVESTOCK INDUSTRY—HORSES AND MULES.

Close-up of a horse's head—views of horses in barns and pastures in Montana and Alabama—horses on a Texas ranch—horses on exhibition and at a horse-show—high-jumping on horseback—plowing wheat in Texas with several teams—mustang pony with twins nursing—burros in a sheep drive near Phoenix—Indian beasts of burden—views of mules and colts in barnyards and pastures—pack trains in the mountains of the west.

25. THE LIVESTOCK INDUSTRY—CATTLE, SHEEP AND GOATS.

Beef cattle of Texas on the range—champion shorthorns—milk cows in pasture—favorite breeds and types—modern dairy barns—a mechanical milker—a milking contest in California—a sheep drive near Phoenix. Arizona—sheep and lambs—shearing sheep, sheep in Australia—goat ranch—views of long-haired Angora goats—goats and kids playing.

26. POTTERY AND STATUARY.

Pottery as an American industry—throwing a vase on a potter's wheel—making cast articles in molds—making statuettes—how an amphora is worked out—carving a statue.

27. ITALY, GIBRALTAR AND MONTE CARLO.

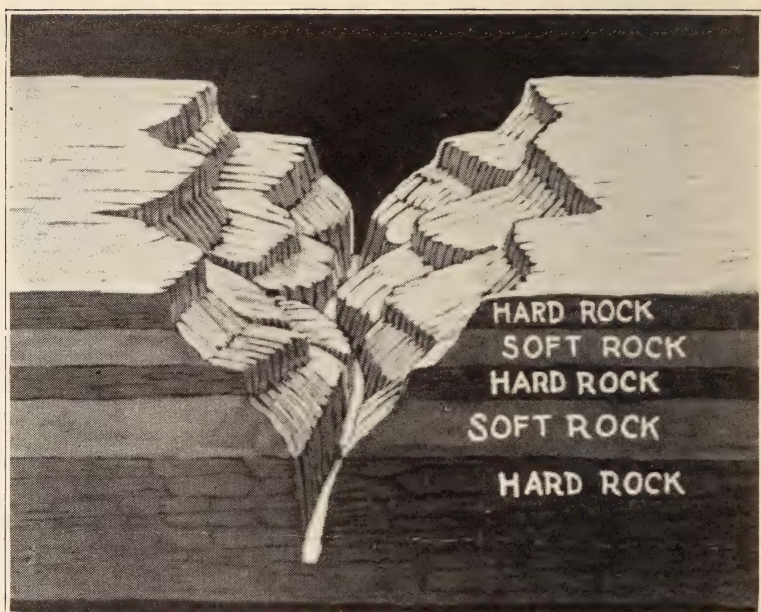
Italian dances—the road from Castellammare to Sorrento—panorama of Sorrento—temples of Apollo, Diana, and Juno in Sicily—sunset on the Bay of Naples—panorama of the Rock of Gibraltar—panorama of Monte Carlo with a view of the prince's palace.

28. FALLS AND RAPIDS.

Niagara, Shoshone and Yosemite Falls—Minnehaha Falls—Kirifuri Falls of Japan—shooting the Fujikawa Rapids—rapids in swift mountain streams.

29. AMERICAN SPORTS.

Flashes of football, basket ball, tennis, golf, and swimming—characteristic groups of the population engaged in typically American sports.



SCENE FROM "REGIONAL GEOGRAPHY (GRAND CANYON OF THE COLORADO)—p. 427



THE ANTLERS OF THE ELK ARE SHED EACH SPRING. SCENE FROM DITMAR'S LIVING NATURAL HISTORY—p. 419

30. CHILDREN OF MANY NATIONS.

A children's fancy dress party—Boy Scouts in summer camps—young America at marbles—children with their pets—Pueblo woman and child—Sunday morning bath in Panama—another kind of bath in India—boy duck drivers in Java—Japanese children in California—feeding the temple doves in Japan—Igorot children—"Bye-bye, Papa."

FORD EDUCATIONAL LIBRARY

Order from the Ford Motion Picture Laboratories Detroit, Mich.

(Mostly Geographical and Vocational)

(The following Forty-five subjects are accompanied with Teachers' Leaflets and are sold at \$50 per reel)

Film No.	Footage	Subject
3.	684	Grand Canyon of the Colorado.
4.	834	Yosemite Valley.
5.	892	Rocky Mountains.
6.	738	Yellowstone Park.
7.	550	Mount Rainier.
8.	769	Niagara Falls.
9.	890	Panama Canal.
10.	822	Washington, D. C.
11.	560	Democracy in Education.
12.	713	Some of Uncle Sam's Workshops.
13.	954	Iron and Steel.
14.	865	Making a Rubber Tire.
15.	792	Oyster and Shrimp Fishing.
16.	800	Olives and Oranges.
17.	892	The Honey Bee.
18.	792	Milk as Food (See sample lesson given in Teachers' Leaflet, Chapter VIII).
19.	662	The Banana.
20.	529	The Date Palm.
21.	640	Making Maple Sugar.
22.	703	Mining Anthracite Coal.
23.	1193	Brain Operation (Surgical).
25.	800	Goitre Operation "
29.	847	Meat Packing.

428 MOTION PICTURES FOR INSTRUCTION

30.	691	Salmon Fishing.
31.	790	Cattle Ranch.
34.	823	Luther Burbank.
35.	771	Irrigation.
36.	1001	Babies of Wild Animals.
37.	1605	The Carburetor (2 reels).
39.	718	Pueblo Indians.
40.	952	Wheat and Flour.
41.	452	Big Trees of California.
42.	671	Water Supply of a Great City.
44.	870	New York City.
47.	945	Modern Oil Refining.
50.	968	Lumbering in North Woods.
57.	825	Sugar.
74.	967	Paper Making.
78.	982	Changing Hides into Leather.
80.	901	Pottery.
82.	945	The Great Lakes.
85.	914	Hawaiian Islands.
89.	879	Mexico City.
96.	955	Our Common Birds.
100.	1045	New Orleans.

1921 RELEASES

\$25.00 PER REEL

Film No. Footage

1.	800	In Fairyland.
2.	750	The Message.
3.	700	Democracy in Education.
4.	650	In a Palace of Honey (Honey Industry).
5.	700	Hurry Slowly (A Street Safety Picture).
6.	650	Tropical Sons.
7.	700	For Mexico.
8.	1590	Iron and Steel, Part I.
9.	"	Iron and Steel, Part II.
10.	1000	Presidents of the United States.
11.	700	Where the Columbia River Rises.

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| 12. | 950 | Grand Canyon. |
| 13. | 963 | Lumber Industry. |
| 14. | 700 | Nassau to Kingston. |
| 15. | 1910 | Landmarks of the American Revolution, Part I. |
| 16. | " | Landmarks of the American Revolution, Part II. |
| 17. | 650 | Round-Up on the Bar-U (Cattle Ranch). |
| 18. | 725 | Yosemite Valley. |
| 19. | 800 | Old Mexico of Today (Mexico City). |
| 20. | 950 | Some of Uncle Sam's Workshops. |
| 21. | 600 | Clear to the Bottom (Silver Springs, Fla.). |
| 22. | 495 | Big Trees of California. |
| 23. | 700 | Kingston, Jamaica. |
| 24. | 650 | Something to Crow About (Poultry Industry). |
| 25. | 920 | Olive and Orange Growing. |
| 26. | 1000 | Dynamic Detroit. |
| 27. | 800 | Good for Thought (Dairy Industry). |
| 28. | 850 | Yellowstone National Park. |
| 29. | 850 | Sponging for a Living (Sponge Industry). |
| 30. | 700 | The Pride of Mexico (Guadalajara). |
| 31. | 1199 | Landmarks of Early Explorations and Settlements in
North America, Part I. |
| 32. | " | Landmarks of Early Explorations and Settlements in
North America, Part II. |
| 33. | 800 | Civil War Period. |
| 34. | 650 | A Century of Progress, Part I. |
| 35. | 700 | A Century of Progress, Part II. |
| 36. | 800 | The Rocky Mountains, Part I. |
| 37. | 850 | The Rocky Mountains, Part II. |
| 38. | 800 | Industrial Working Conditions. |
| 39. | 750 | Niagara Falls. |
| 40. | 700 | Baltimore and the Oyster Industry. |
| 41. | 600 | Shrimp Fishing. |
| 42. | 700 | The Nation's Capital—Washington, D. C. |
| 43. | 650 | Knights of the Saddle—Agriculture. |
| 44. | 600 | Mt. Rainier—Regional Geography. |
| 45. | 700 | Safety in the Mine—Industrial Geography. |
| 46. | 850 | Fire Prevention. |
| 47. | 800 | "Oh, For the Life of a Fireman." |
| 48. | 750 | New York City. |
| 49. | 700 | Good "Bad Lands." |
| 50. | 750 | The Good Stream. |

430 MOTION PICTURES FOR INSTRUCTION

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|-----|------|--|
| 51. | 900 | Journeys through the Valley of Heart's Delight. |
| 52. | 1000 | Playgrounds for the People in Valley of Hearts' Delight. |

1920 RELEASES

\$10.00 PER REEL

Film No. Footage

- | | | |
|------|-----|--|
| 183. | 763 | Bubbles (Making Soap). |
| 184. | 725 | Just Kids (Making Gloves). |
| 185. | 750 | Taken with a Grain of Salt (Rock Salt Mining). |
| 186. | 775 | The Flowing Road (Evolution of a River). |
| 187. | 777 | De Light—Making an Electric Light Bulb. |
| 188. | 752 | In Higher Spheres (Mountain Scenic and Making Silk Hose). |
| 189. | 879 | Silverware. |
| 190. | 800 | Tick Tock (Making Watches and Clocks). |
| 191. | 800 | Broken Silence—A Visit to a Day School for Deaf Children. |
| 192. | 750 | With Every Meal—Dealing with Knives, Forks and Spoons. |
| 193. | 655 | The Alligator Hunt. |
| 194. | 500 | A Pilgrimage—Providence, Newport and Plymouth. |
| 195. | 600 | Cut and Dried (Activities of a Lumber Camp). |
| 196. | 800 | From East to West (Making Wilton Rugs). |
| 197. | 525 | North Wind's Masonry (Winter Scenes of Niagara Falls). |
| 198. | 671 | Cherry Blossom Time (Japanese Festival—Rice Growing). |
| 199. | 750 | The Reawakening (Physical Reconstruction Work at Fort Sheridan). |
| 200. | 800 | See Saw (Making Saws). |
| 201. | 800 | Make Game (Making Sporting Goods). |
| 202. | 850 | Home of the Seminole (Seminole Indian Camps). |
| 203. | 777 | Playthings of Childhood (Making Toys). |
| 204. | 730 | To "Suit" Man (Making Clothing). |
| 205. | 625 | Chu Chu (Making Gum). |
| 206. | 750 | Wickerware (Making Wicker and Reed Furniture). |
| 207. | 700 | Little Comrades (Open Air School). |
| 209. | 750 | Water as Power. |



CAMERA MEN OF THE CANADIAN GOVERNMENT MOTION PICTURE BUREAU, OTTAWA, CANADA—p. 436



A VERITABLE "SLOW MOTION" PICTURE OF A GLACIER "IN ACTION."
SCENE FROM "LEAVES FROM A RANGER'S NOTEBOOK," MOTION PICTURE
BUREAU OF CANADIAN GOVERNMENT—p. 436

PURCHASE FILMS

431

210.	650	Just "Write" (Making Fountain Pens).
211.	700	Current Occurrences (Making Electric Flat Irons and Percolators).
212.	770	Into the Big Cypress (Scenic).
213.	600	Starting Life (Showing Young Life).
214.	850	To Queen's Taste (Making Candy).
215.	605	Aqua (A City Water System).
216.	700	Out of the Woods (Logging).
217.	750	In for a Raise (Making Baking Powder & Macaroni).
219.	580	Airistocracy (Bird Life).
220.	700	In the Glory of the Past (San Antonio).
221.	650	Between Friends (El Paso).
222.	700	For the Future (Michigan State Industrial School).
223.	821	The Way of the West (Prescott; Arizona, Frontier Days).
224.	775	Timberlust (Reforestation).
225.	775	What the Ocean "Hides" (The Shark Industry).
226.	671	Nassau (Nassau, Bahama Islands).
227.	700	In Arizona (Scenic).
228.	800	Number, Please (The Telephone).
229.	800	The Banana (Banana Industry).
230.	672	Happy Hours (National Sports).
231.	700	Farm Boys Abroad (Texas Farm Boys' Special Tour).
232.	750	The Wards of a Nation (Indian Convocation).
233.	630	Ocean Tears (Ocean Salt Industry).
234.	855	Christmas Thoughts (A Christmas Picture).

Many of the reels in the Ford 1920 and 1921 lists are deposited with Ford dealers in various cities for free loan to schools and similar organizations, and for these the dealers should be communicated with. The reels in the Ford Educational Library, however, are for sale only, and should be ordered direct from Detroit. These latter are all accompanied by teachers' leaflets, which are of great help in presenting the films for teaching purposes.

Mr. Beseler's Educational Library Catalog of Motion Picture Films, as issued by The American Motion Picture Cor-

poration, contains over five hundred excellent subjects in agriculture, Americanization, aviation, biography, child welfare, education, forestry, health and hygiene, history, home economics, industries, juvenile, literature, science and travel, but they are printed on inflammable stock and too widely scattered for reliable listing. The ownership of the negatives is difficult to determine. The breaking up of this valuable library is a striking example of the financial difficulties encountered by all non-theatrical producers.

Further information may be procured from Thos. A. Baskerville, Receiver, American Motion Picture Corporation, 126 W. 46th St., N. Y. The Apollo Film Co. of Newark, N. J., seems to have the greatest number of the prints, for both sale and rent.

The Library of the Urban Popular Classics was announced to include educational subjects of more than a thousand reels in geography, nature study (science), industry, history and recreation.

A large number of these have been issued, but unfortunately Mr. Urban's production plans were interrupted by financial difficulties. The author's efforts to trace the possession of the negatives, and to distinguish those already issued from those not yet produced have been unavailing. All he can say is that the Urban Popular Classics are of a very high order, and prints of them are scattered among a number of non-theatrical exchanges throughout the country. The best known of these reels are the Great American Author Series, several of which are included in the Film Libraries given in Chapter II. This series can be secured from Pictorial Clubs, Inc., 350 Madison Ave., New York City. Great American Statesmen is a companion series. The Urban Popular Classics are handled by the Spiro Film Corporation, Irvington-on-Hudson, N. Y.

A SELECTED BIBLIOGRAPHY

(Only recent books and pamphlets are mentioned)

Barnes, Burton—*Course of Study in Visual Education*. 246 pp., Board of Education Detroit, Mich. 1926.

The latest and best presentation of the subject. The *Educational Screen* says of it: "It should serve as a model of achievement to any other city that has not yet attained a systematic basis for this all-important phase of modern teaching."

Dickinson, Sherman—*Visual Education for Teachers of Agriculture*. 66 pp., University of Missouri Bulletin, October 10th, 1925. Vol. 26, No. 29.

Dorris, Anna V.—*The Visual Instruction in the Berkeley Schools*. 112 pp., Educational Screen, Inc., Chicago, 1923.

A compendium of information relating to all types of visual aids, useful in school subjects with some hints on how to use the material. A valuable monograph.

Ellis, Don C., and Thornborough, Laura—*Motion Pictures in Education*. 275 pp., Thomas Y. Crowell Company, New York, 1923.

Discusses educational films and their use as well as practical information regarding motion picture projectors. One of the latest and best books on this subject.

Freeman, Frank N. and collaborators—*Visual Education*. 388 pp., University of Chicago Press, 1924.

The most elaborate record on the experimental phases of the educational motion pictures yet made; published with the aid of a grant from the Commonwealth Fund. Reports of experiments by McClusky, F.C.—James—Reeder—Hollis—Hoefer—Keith—McClusky, H.Y.—Rolfe—Shaw—Walker—Beglinger and Thomas.

434 MOTION PICTURES FOR INSTRUCTION

Film Year Book for 1926—Dannenberg, Joseph, Editor.
864 pp., Film Daily, 1650 Broadway, New York City.

Replete with information of the film industry, mostly pertaining to the theatrical phase, but including also much of interest to non-theatrical film users. The Who's Who of the film world.

Hollis, A. P.—*Visual Educational Departments in Educational Institutions*. 36 pp., Bureau of Education Bulletin No. 8, 1924.

A late statistical study of the organization and status of visual education in universities, colleges and the larger cities.

Marchant, Sir James (Editor)—*The Cinema in Education*.
160 pp., George Allen & Unwin, Ltd., London, 1925.

The most recent book on the subject. Recounts and analyzes an experiment in film lessons to groups of children at University College under the direction of S. J. F. Philpott, with Professor Charles Spearman, Ph.D., psychologist, and Professor Cyril Burt, as Associates.

National Academy of Visual Instruction: Annual Proceedings,
J. V. Ankeney, Sect'y. University of West Virginia,
Morgantown, W. Va.

Norman, H. W.—*Visual Education*. 30 pp., Bulletin of The
Extension Division, Indiana University, Vol. 10, No. 8,
1925.

Edited from the point of view of a university center for the statewide distribution of visual aids.

Rathman, Carl G.—*Visual Aids of the St. Louis Museum*.
36 pp., Bureau of Education Bulletin No. 39, 1924.

Visual aids in general are discussed, but the emphasis is on the educational exhibit as contained in and distributed by the Museum.

Visual Instruction Association of America: Vols. 1, 2, and 3
1924, 1925, 1926.

Interesting and informative articles by well-known leaders in visual education.

Weber, Joseph J.—“Comparative Effectiveness of Some Vis-

ual Aids in Seventh Grade Instruction." 130 pp., *Educational Screen*, Chicago, 1922.

Accepted as a doctor's thesis by Columbia University. The first extensive research published, using the controls and statistical methods of the modern university graduate school. It measures the effect of using motion pictures and other visual aids in various combinations and with parallel groups, principally in the seventh grade.

Wythe, F. S.—Schedule of film lesson service.

An elaborate schedule of educational films arranged to accompany typical courses of study in the ordinary American school systems. The course is outlined in great detail in three Teachers' Manuals for classes in citizenship, nature study and current events respectively. A thorough-going and constructive contribution to film pedagogy. The service is managed by the Neighborhood Motion Picture Service, Inc., 131 W. 42nd St., New York City, and undertakes to take complete charge of visual education in a city school system, furnishing machines and operators as well as films, according to the desires and equipment of the school system. The films are mostly those recommended in the three film libraries (Chapter II).

MAGAZINE

Educational Screen, 5 S. Wabash Ave., Chicago, Ill. (Subscription includes copy of "1001 Films.")

IMPORTANT EDUCATIONAL FILM LISTS

American Motion Picture Corporation (See General Vision Co., Successors).

Atlas Educational Film Company, Oak Park, Ill.

Apollo Film Company, 286 Market Street, Newark, N. J.

Henry Bollman, 19 W. 10th St., New York City.

Bray Productions, Inc., 120 W. 42nd St., New York City.

Beseler Education Film Corporation, 71 W. 23rd St., New York City.

436 MOTION PICTURES FOR INSTRUCTION

Bureau of Commercial Economics, 1108 16th St., N. W., Washington, D. C.

Burton Holmes Laboratories, 7510 N. Ashland Ave., Chicago, Ill.

The Canadian Government Motion Picture Bureau, Ottawa, Canada.

Carter Cinema Producing Corp., 1476 Broadway, New York City.

Castle Films, 268 Market Street, San Francisco, Calif.

Community Motion Picture Service Inc., 46 W. 24th St., New York City.

DeVry Corporation, 1111 Center Street, Chicago, Ill.

Edited Pictures System, Inc., 71 W. 23rd St., New York City.

Raymond L. Ditmars, c/o The New York Zoölogical Society, Borough of Bronx, New York City.

The Ford Motion Picture Laboratories, Detroit, Mich.

The General Electric Company, Schenectady, New York.

General Vision Company, 104 W. 42nd St., New York City.

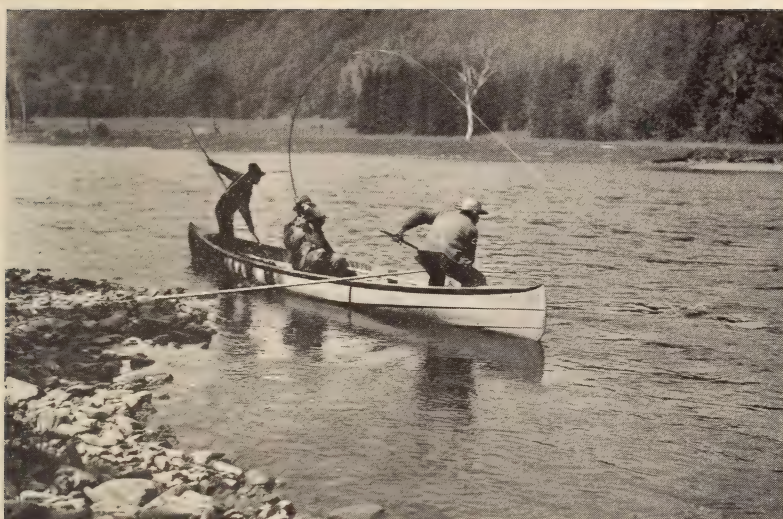
The Harcol Motion Picture Industries, 610 Baronne Street, New Orleans, La.

Homestead Films, Inc., 732 S. Wabash Ave., Chicago, Ill.

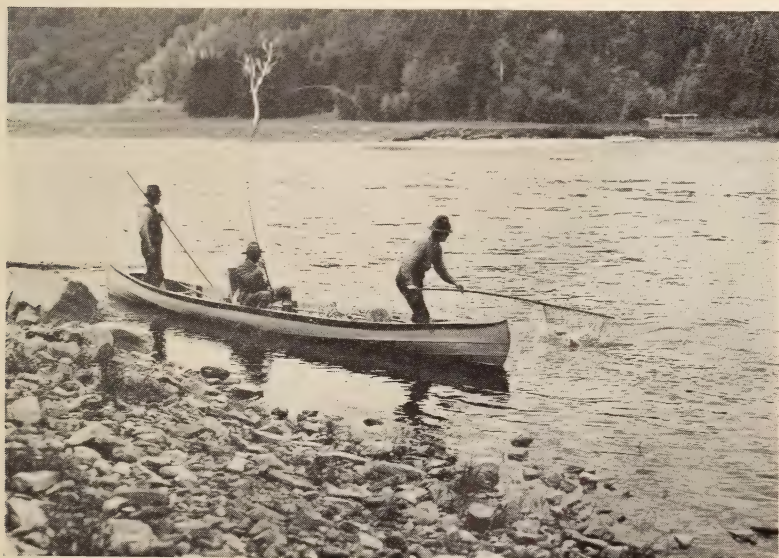
Illinois Steel Company, Department of Safety and Relief, 208 S. LaSalle Street, Chicago, Ill.

International Harvester Company, 606 S. Michigan Ave., Chicago, Ill.

George Kleine, 49 W. 45th St., New York City.



A FISHING DRAMA. (1) ON THE HOOK. SCENE FROM "A FISH AND BEAR TALE," CANADIAN GOVERNMENT MOTION PICTURE BUREAU—p. 436



A FISHING DRAMA. (2) IN THE BASKET. SCENE FROM "A FISH AND BEAR TALE," CANADIAN GOVERNMENT MOTION PICTURE BUREAU—p. 436



- Alexander Leggett, 1476 Broadway, New York City.
- National Health Council, 370 Seventh Ave., New York City.
- The National Cash Register Company, Dayton, Ohio.
- The National Board of Review of Motion Pictures, 70 Fifth Ave., New York City.
- Northern Pacific Railway Company, General Passenger Department, St. Paul, Minn.
- Neighborhood Motion Picture Service, Inc., 131 W. 42nd St., New York City.
- Pathé Exchange, Inc., Educational Department, 35 W. 45th St., New York City.
- Pictorial Clubs, Inc., 350 Madison Ave., New York City.
- Pilgrim Photo Play Exchange, 1150 S. Michigan Ave., Chicago Ill.
- Portland Cement Association, 111 W. Washington Street, Chicago, Ill.
- Rothacker Industrial Films, Inc. 7510 N. Ashland Ave., Chicago, Ill.
- Rowland Rogers Studios, 71 W. 23rd St., New York City.
- Society for Visual Education, Inc., 327 S. LaSalle Street, Chicago, Ill.
- Spiro Film Corporation, Irvington-on-Hudson, New York City.
- Visual Text Book Publishers, 212 W. 11th Street, Los Angeles, Calif.
- Western Electric Co., 120 W. 41st., New York City.

438 MOTION PICTURES FOR INSTRUCTION

Westinghouse Electric Mfg. Co., East Pittsburgh, Penna.

Worcester Film Corporation, Worcester, Mass.

Yale University Press Film Service, Yale University, New Haven, Conn.

The Y. M. C. A. Motion Picture Bureau, 120 W. 41st St., New York City, and 1111 Center Street, Chicago, Illinois.

Y. W. C. A. National Board, 600 Lexington Ave., New York City.

United States Steel Corporation, 71 Broadway, New York City.

FEDERAL GOVERNMENT

U. S. Department of Agriculture, Washington, D. C.

U. S. Reclamation Service, Washington, D. C.

U. S. Bureau of Mines, Experiment Station, Pittsburgh, Pa.

U. S. Department of Labor—Women's Bureau and Children's Bureau, Washington, D. C.

U. S. Public Health Service, Washington, D. C.

U. S. Navy Department, Washington, D. C.

Bulletins of Universities and Cities listed in Chapter VIII.

APPENDIX

Motion picture projectors, screens and accessories are not discussed in the body of this book.

PORTABLE PROJECTORS

For classroom teaching a portable projector is essential. Even if the school has already bought a big theater type machine for permanent installation in an assembly room, the portable classroom projector is needed for showings in the several classrooms. A good reliable portable can be had, weighing only twenty-five pounds. As these are light enough to be carried easily by a teacher or pupil, and can be attached to any light socket in the room, they will be used ten times to every once of the big machines. With these machines and daylight screens, pictures of professional quality can be shown in only a semi-darkened room.

A student or teacher can be taught in a half hour to operate these machines. The projectors should handle film of full standard professional size (35 millimeters) such as is used in theaters, so that the whole world of motion pictures may be available. Off-standard or narrow width machines are limited to the special films made of that size for those special machines, or else special production prints from the standard negatives, and the illumination is insufficient for classrooms and assembly rooms.

Up-to-date portable and semi-portable projectors are supplied with a stop-on-the-film shutter which, if the shutter is of the proper kind of glass, permits the teacher to stop on any picture for several minutes, without danger. Here we have combined the advantage of the stereopticon and the motion picture projector. This simple device has doubled the value

of the motion picture machine in the school room and removes the last objection to its installation.

A separate stereopticon is a necessity in any school having an organized system of visual instruction.

NON-INFLAMMABLE FILM

Schools should purchase only non-inflammable film of standard theater width (acetate of cellulose base). This should be stored in humidor cans to preserve its flexibility, or in humidified vaults or containers. With this type of film there is no fire risk whatever involved, and no insurance permits are required.

MOTION PICTURE CAMERAS

A motion picture camera using standard width film will be found a useful adjunct to motion picture equipment. It should not require a crank, as amateurs find it difficult to turn the crank of a heavy tripod camera with the proper uniform speed necessary to good photography. Heretofore, also, standard motion picture cameras were too expensive for ordinary school use (they cost from \$600 to \$5,000). Excellent cameras, however, capable of doing professional work are available now at about \$150. As in the case of projectors, narrow width cameras should be avoided, as their pictures cannot be shown by ordinary projection machines. The pictures are also too small to magnify proportionately without grain effect on large screens, and the small size of the lens opening in sub-standard projectors reduces the illumination so that it is insufficient for standard brilliancy, except in the home or smaller classrooms.

THE FILM PRAYER*

I am celluloid, not steel; O god of the machine, have mercy. I front four great dangers whenever I travel the whirring wheels of the mechanism.

Over the sprocket wheels, held tight by the idlers, I am forced by the motor's might. If a careless hand mistreads me, I have no alternative but to go to my death. If the springs at the aperture gate are too strong, all my splices pull apart. If the pull on the take-up reel is too violent, I am torn to shreds. If dirt collects in the aperture, my film of beauty is streaked and marred, and I must face my beholders—a thing ashamed and bespoiled. Please, if I break, fasten me with clips; never with pins. Don't rewind me—my owner wants that privilege, so that he may examine me, heal my wounds, and send me rejuvenated upon a fresh mission.

I travel many miles in iron cans. I am tossed on heavy trucks, sideways and upside down. Please see that my own paper band is wrapped snugly around me on the reel and fastened with a string, so that my first few coils do not slip loose in my shipping case, to be bruised and wounded beyond the power to heal. Put me in my own shipping case. Don't make me a law-breaker. The law requires a standard can, two address labels, and a yellow caution label. Scrape off all old labels so I will not go astray.

Speed me on my way. Others are waiting to see me. The "next day" is the last day I should be held. Have a heart

* Written by the author in 1920 for the Visual Instruction Service of the State College, Fargo, N. D. It has been widely used by film exchanges.

for the other fellow who is waiting, and for my owner who will get the blame. Don't humiliate me by sending me back without paying my passage and insuring me against loss or damage.

I am a delicate ribbon of celluloid—misuse me and I disappoint thousands; cherish me and I delight and instruct the world.

INDEX

Names of films are in italics. Only films mentioned in the body of the text of Part I are in this index. Films in the three libraries (Chapters II and III) are not separately indexed, as these libraries constitute their own index, being arranged alphabetically under each subject of study, in the three main groups of Free Films, Rental Films and Purchase Films.

When looking up a film for a special subject of study, look in both Index, and in Part II. Films listed in Part I are not repeated in Part II.

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- Cinema in Education, The, New English book edited by Sir James Marchant, 191.
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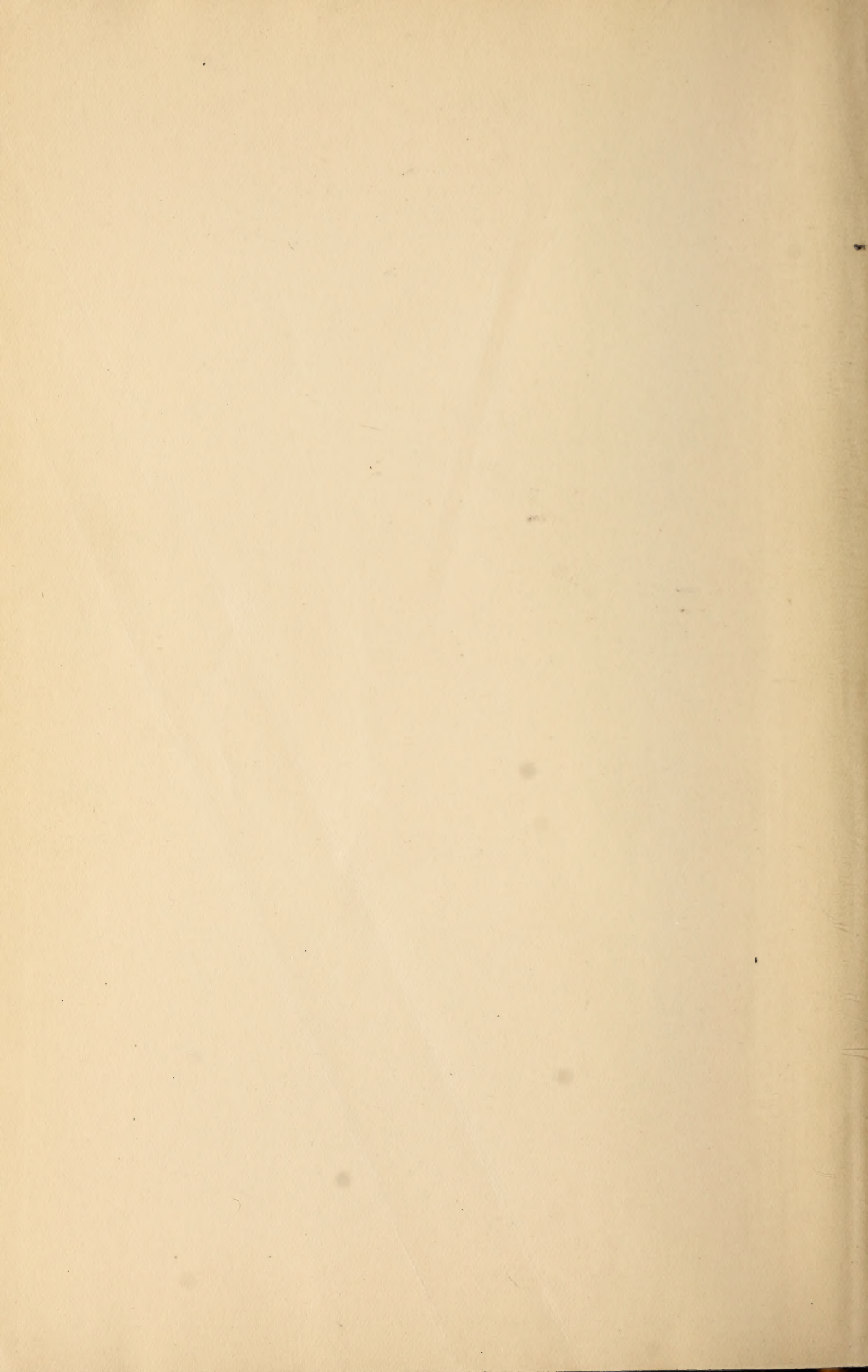
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